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=> fil reg
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STRUCTURE FILE UPDATES:    8 OCT 2009  HIGHEST RN 1187732-58-6
DICTIONARY FILE UPDATES:   8 OCT 2009  HIGHEST RN 1187732-58-6

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on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> d que
L2            38 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  (463-79-6/BI OR
                 10377-51-2/BI OR 105-58-8/BI OR 108-32-7/BI OR 108-88-3/BI
                 OR 108554-72-9/BI OR 113187-28-3/BI OR 131651-65-5/BI OR
                 1330-20-7/BI OR 14024-11-4/BI OR 14283-07-9/BI OR 18424-17-
                 4/BI OR 21324-40-3/BI OR 24599-21-1/BI OR 25496-08-6/BI OR
                 27359-10-0/BI OR 29935-35-1/BI OR 33454-82-9/BI OR
                 35363-40-7/BI OR 37220-89-6/BI OR 41891-54-7/BI OR
                 4437-85-8/BI OR 4472-22-4/BI OR 462-06-6/BI OR 4645-32-3/BI
                  OR 4851-64-3/BI OR 56525-42-9/BI OR 616-38-6/BI OR
                 623-53-0/BI OR 623-96-1/BI OR 682-30-4/BI OR 71-43-2/BI OR
                 7439-93-2/BI OR 7447-41-8/BI OR 7791-03-9/BI OR 78-67-1/BI
                 OR 90076-65-6/BI OR 96-49-1/BI)
L3             9 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L2 AND P/ELS
L4       1417509 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  (P(L)O)/ELS
L5         44384 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L4 AND PMS/CI
L7         16344 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L4 AND PROPENOIC
                 ACID?
L8        176900 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L4 AND ETHYL
                 ESTER?
L9          2397 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L4 AND BUTENOIC
                 ACID?
L10        32885 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L4 AND ETHENYL?
L11       131674 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L4 AND METHYLETHY
                 L?
L12            8 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L3 AND (L7 OR L8
                 OR L9 OR L10 OR L11)
L13         1409 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L12
L14        41850 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L5
L17        11355 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  "BATTERY ELECTROLY
                 TES"+PFT,NT/CT
L21        26435 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L5 AND (PHOSPHIN?
                  OR PHOSPHON?)
```

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L22      203815 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  (L7 OR L8 OR L9
                OR L10 OR L11) AND (PHOSPHIN? OR PHOSPHON?)
L23       16945 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L21
L24      128988 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L22
L26         332 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  (L23 OR L24) AND
                BATTER?
L28         143 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L26 AND DEV/RL
L29          30 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L28 AND L23
L30          31 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L13 AND ELECTROCHE
                M?/SC,SX
L32          20 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L13 AND (ELECTRODE
                # OR ANODE# OR CATHODE# OR NEGATIVE ELECTRODE# OR POSITIVE
                ELECTRODE# OR BATTERY# OR BATTERIES#)
L33          12 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L30 AND (ELECTRODE
                # OR ANODE# OR CATHODE# OR NEGATIVE ELECTRODE# OR POSITIVE
                ELECTRODE# OR BATTERY# OR BATTERIES#)
L34          30 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L29 AND (ELECTRODE
                # OR ANODE# OR CATHODE# OR NEGATIVE ELECTRODE# OR POSITIVE
                ELECTRODE# OR BATTERY# OR BATTERIES#)
L35          49 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  (L32 OR L33 OR
                L34)
L37          25 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L35 AND (1840-2002
                )/PRY,AY,PY
L38         851 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L14 AND (ELECTRODE
                # OR ANODE# OR CATHODE# OR NEGATIVE ELECTRODE# OR POSITIVE
                ELECTRODE# OR BATTERY# OR BATTERIES#)
L39         300 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L38 AND DEV/RL
L41         118 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L39 AND ELECTROLYT
                ?
L42         108 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L41 AND ELECTROCHE
                M?/SC,SX
L43          68 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L42 AND  (1840-200
                2)/PRY,AY,PY
L44          24 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L43 AND L17
L45          40 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L37 OR L44


=> fil hcap
FILE 'HCAPLUS' ENTERED AT 10:39:50 ON 09 OCT 2009
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FILE COVERS 1907 - 9 Oct 2009  VOL 151 ISS 16
FILE LAST UPDATED: 8 Oct 2009  (20091008/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED:  Aug 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE:  Aug 2009

HCAplus now includes complete International Patent Classification (IPC)
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reclassification data for the third quarter of 2009.

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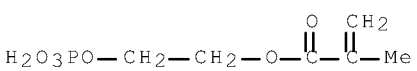
This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l45 1-40 ibib ed abs hitstr hitind

L45 ANSWER 1 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:118032 HCAPLUS Full-text
DOCUMENT NUMBER: 140:165063
TITLE: Anisotropically conductive films having good storage stability and high adhesion both to silica and to ITO
INVENTOR(S): Hiraoka, Hidetoshi; Sakurai, Ryo; Miura, Akio; Morimura, Yasuhiro
PATENT ASSIGNEE(S): Bridgestone Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004043725	A	20040212	JP 2002-205799 <--	20020715
JP 4259056	B2	20090430		
PRIORITY APPLN. INFO.:			JP 2002-205799 <--	20020715

ED Entered STN: 13 Feb 2004
AB The films, useful for bonding of terminals of display panels and flexible printed circuit boards, are formed from conductive particle-dispersed photocurable resin compns. containing aliphatic unsatd. sidechain-containing poly(vinyl acetals) and phosphoryl (meth)acrylates. Thus, a composition of a reaction product of unsatd. sidechain-induced vinyl butyral resin and P1M (phosphoryl methacrylate) 100, (BzO)2 2, Super Beckamine L 125-60 (melamine resin) 5, pentaerythritol tetraacrylate 20, γ-methacryloxypropyltrimethoxysilane 0.5, and 16GNR10MX (conductive particle) 4 parts was pasted on a separator film and dried to give an adhesive film which showed reliable boning of terminal-formed flexible printed circuit boards and good elec. interconnection.
IT 24599-21-1DP, Light Ester P 1M, reaction products with sidechain-unsatd. vinyl butyral resins
(unsatd. sidechain-containing, reaction products with phosphoryl methacrylate; storage-stable conductive adhesive films containing phosphoryl methacrylate-modified vinyl acetal resins)
RN 24599-21-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-(phosphonooxy)ethyl ester (CA INDEX NAME)



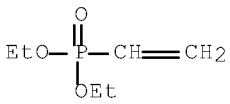
IC ICM C09J007-00
ICS C08F290-12; C08J005-18; C09J009-02; C09J129-14; C09J133-04; C09J167-06; H01B001-22; H01B005-16; C08L029-04
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
IT 50926-11-9, Indium tin oxide
(adherend surface, terminal electrodes; storage-stable conductive adhesive films containing phosphoryl methacrylate-modified vinyl acetal resins)
IT 24599-21-1DP, Light Ester P 1M, reaction products with sidechain-unsatd. vinyl butyral resins
(unsatd. sidechain-containing, reaction products with phosphoryl methacrylate; storage-stable conductive adhesive films containing phosphoryl methacrylate-modified vinyl acetal resins)

L45 ANSWER 2 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:59637 HCAPLUS Full-text
DOCUMENT NUMBER: 140:79861
TITLE: Method of fabrication of lithium secondary battery
INVENTOR(S): Lee, Jin-young; Lee, Kyoung-hee
PATENT ASSIGNEE(S): S. Korea
SOURCE: U.S. Pat. Appl. Publ., 7 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

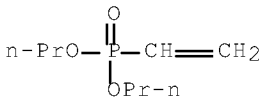
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040013944	A1	20040122	US 2003-617811 <--	20030714
KR 2004006781	A	20040124	KR 2002-41169 <--	20020715
JP 2004039642	A	20040205	JP 2003-274506 <--	20030715
JP 4202854	B2	20081224		
CN 1501542	A	20040602	CN 2003-165003 <--	20030715
CN 1288791	C	20061206		
PRIORITY APPLN. INFO.:			KR 2002-41169 A <--	20020715

ED Entered STN: 23 Jan 2004
AB A lithium secondary battery of the present invention comprises a pos. electrode; a neg. electrode; a separator interposed between the pos. and neg. electrodes; and an electrolyte on the separator, wherein the electrolyte includes a nonaq. organic solvent, a lithium salt, and a linear polymer having P=O bonds. The electrolyte improves the swelling characteristics of lithium secondary batteries. A lithium secondary battery with the electrolyte and a method for preparing the electrolyte and battery is described.
IT 682-30-4, Diethyl vinyl phosphonate 4472-22-4, Dipropyl vinyl phosphonate 4645-32-3, Dimethyl vinyl phosphonate 4851-64-3, Diethyl vinyl phosphate 24599-21-1 41891-54-7, Triethyl 3-methyl-4-phosphonocrotonate 108554-72-9 113187-28-3, Allyl diethyl phosphonoacetate
(method of fabrication of lithium secondary battery)

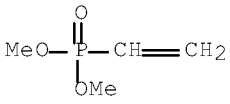
RN 682-30-4 HCAPLUS
CN Phosphonic acid, P-ethenyl-, diethyl ester (CA INDEX NAME)



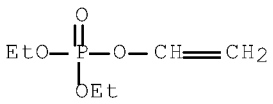
RN 4472-22-4 HCAPLUS
CN Phosphonic acid, ethenyl-, dipropyl ester (9CI) (CA INDEX NAME)



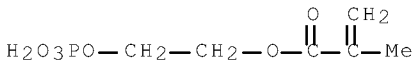
RN 4645-32-3 HCAPLUS
CN Phosphonic acid, P-ethenyl-, dimethyl ester (CA INDEX NAME)



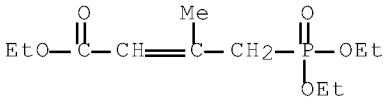
RN 4851-64-3 HCAPLUS
CN Phosphoric acid, ethenyl diethyl ester (CA INDEX NAME)



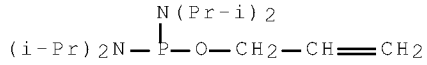
RN 24599-21-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-(phosphonooxy)ethyl ester (CA INDEX NAME)



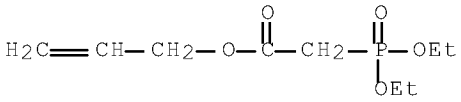
RN 41891-54-7 HCAPLUS
CN 2-Butenoic acid, 4-(diethoxyphosphinyl)-3-methyl-, ethyl ester (CA INDEX NAME)



RN 108554-72-9 HCAPLUS
CN Phosphorodiamidous acid, N,N,N',N'-tetrakis(1-methylethyl)-, 2-propen-1-yl ester (CA INDEX NAME)



RN 113187-28-3 HCAPLUS
CN Acetic acid, 2-(diethoxyphosphinyl)-, 2-propen-1-yl ester (CA INDEX NAME)



IC ICM H01M010-40
INCL 429317000; 429307000; 429338000; 429342000; 429314000
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST lithium secondary battery fabrication
IT Aromatic hydrocarbons, uses
(C1-10 alkyl substituted; method of fabrication of lithium secondary battery)
IT Secondary batteries
(lithium; method of fabrication of lithium secondary battery)
IT Battery electrolytes
Swelling, physical
(method of fabrication of lithium secondary battery)
IT Esters, uses
Ethers, uses
Ketones, uses
(method of fabrication of lithium secondary battery)
IT Lithium alloy, base
(method of fabrication of lithium secondary battery)
IT 71-43-2, Benzene, uses 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 108-88-3, Toluene,

uses 462-06-6, Fluorobenzene 463-79-6D, Carbonic acid, cyclic compds. 463-79-6D, Carbonic acid, linear compound 463-79-6D, Carbonic acid, organic compound 616-38-6, Dimethyl carbonate 623-53-0, Ethyl methyl carbonate 623-96-1, Dipropyl carbonate 1330-20-7, Xylene, uses 4437-85-8, Butylene carbonate 7447-41-8, Lithium chloride (LiCl), uses 7791-03-9, Lithium perchlorate 10377-51-2, Lithium iodide (LiI) 14024-11-4, Lithium tetrachloroaluminate 14283-07-9, Lithium tetrafluoroborate 18424-17-4, Lithium hexafluoroantimonate 21324-40-3, Lithium hexafluorophosphate 25496-08-6, Fluorotoluene 27359-10-0, Trifluorotoluene 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 35363-40-7, Ethyl propyl carbonate, uses 37220-89-6, Lithium aluminate 56525-42-9, Methyl propyl carbonate, uses 90076-65-6 131651-65-5, Lithium nonafluorobutanesulfonate
(method of fabrication of lithium secondary battery)

IT 7439-93-2, Lithium, uses
(method of fabrication of lithium secondary battery)

IT 78-67-1, Azobisisobutyronitrile 682-30-4, Diethyl vinyl phosphonate 4472-22-4, Dipropyl vinyl phosphonate 4645-32-3, Dimethyl vinyl phosphonate 4851-64-3, Diethyl vinyl phosphate 24599-21-1 41891-54-7, Triethyl 3-methyl-4-phosphonocrotonate 108554-72-9 113187-28-3, Allyl diethyl phosphonoacetate
(method of fabrication of lithium secondary battery)

L45 ANSWER 3 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:276684 HCAPLUS Full-text
DOCUMENT NUMBER: 138:274124
TITLE: Self-doped molecular composite battery electrolytes
INVENTOR(S): Harrup, Mason K.; Wertsching, Alan K.; Stewart, Frederick F.
PATENT ASSIGNEE(S): Bechtel Bwxt Idaho, LLC, USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6544690	B1	20030408	US 2000-627462 <--	20000728
PRIORITY APPLN. INFO.:			US 2000-627462 <--	20000728

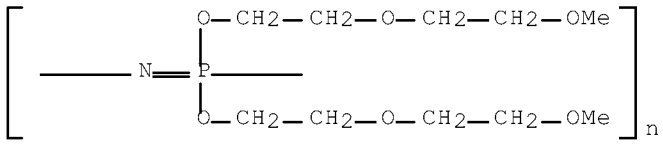
ED Entered STN: 10 Apr 2003
AB This invention is in solid polymer-based electrolytes for battery applications. It uses mol. composite technol., coupled with unique preparation techniques to render a self-doped, stabilized electrolyte material suitable for inclusion in both primary and secondary batteries. In particular, a salt is incorporated in a nano-composite material formed by the in situ catalyzed condensation of a ceramic precursor in the presence of a solvated polymer material, utilizing a condensation agent comprised of at least one cation amenable to SPE applications. As such, the counterion in the condensation agent used in the formation of the mol. composite is already present as the electrolyte matrix develops. This procedure effectively decouples the cation loading levels required for maximum ionic conductivity from electrolyte phys. properties associated with condensation agent loading

levels by utilizing the inverse relationship discovered between condensation agent loading and the time domain of the aging step.

IT 98973-15-0, MEEP
(self-doped mol. composite battery electrolytes
)

RN 98973-15-0 HCAPLUS

CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA INDEX NAME)



IC ICM H01M006-18

INCL 429306000; 429320000; 429322000; 252062200

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38, 57

ST battery electrolyte self doped mol composite;
polymer ceramic composite battery electrolyte

IT Metal alkoxides
(ceramic precursor; self-doped mol. composite battery electrolytes)

IT Composites
(ceramic-polymer; self-doped mol. composite battery electrolytes)

IT Fluoropolymers, uses
(molds; self-doped mol. composite battery electrolytes)

IT Polyphosphazenes
Polysiloxanes, processes
(polyether-; self-doped mol. composite battery electrolytes)

IT Polyethers, processes
(polyphosphazene-; self-doped mol. composite battery electrolytes)

IT Polythioethers
(polyphosphazenes-; self-doped mol. composite battery electrolytes)

IT Battery electrolytes
Membranes, nonbiological
Polymer electrolytes
Primary batteries
Secondary batteries
(self-doped mol. composite battery electrolytes
)

IT Polyphosphazenes
Polysiloxanes, processes
(self-doped mol. composite battery electrolytes
)

IT Polyethers, processes
(siloxane-; self-doped mol. composite battery electrolytes)

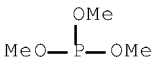
IT 78-10-4, Teos 546-68-9, Tetrakis(isopropyloxy)titanium 2269-22-9,

Aluminum tris(sec-butoxide) 7429-90-5D, Aluminum, alkoxide
7440-21-3D, Silicon, alkoxide 7440-32-6D, Titanium, alkoxide
7440-67-7D, Zirconium, alkoxide 51278-20-7, 1-Butanol, zirconium salt
(ceramic precursor; self-doped mol. composite battery electrolytes)
IT 1309-42-8, Magnesium hydroxide 1310-65-2, Lithium hydroxide
1310-73-2, Sodium hydroxide, processes
(condensation agent; self-doped mol. composite battery electrolytes)
IT 9002-84-0, Teflon
(molds; self-doped mol. composite battery electrolytes)
IT 98973-15-0, MEEP
(self-doped mol. composite battery electrolytes
)
IT 14283-07-9, Lithium tetrafluoroborate
(self-doped mol. composite battery electrolytes
)
OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 4 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:81076 HCAPLUS Full-text
DOCUMENT NUMBER: 138:356122
TITLE: New directions in the development of polymer electrolytes for lithium batteries
AUTHOR(S): Morris, R. Scott; Dixon, Brian G.; Dallek, Steven
CORPORATE SOURCE: Phoenix Innovation, Inc., Wareham, MA, 02576, USA
SOURCE: Proceedings of the Power Sources Conference (2002), 40th, 143-146
CODEN: PPOCFD
PUBLISHER: National Technical Information Service
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 03 Feb 2003
AB Polymer electrolyte Li batteries represent the future of safe, high energy battery systems. Advancement of ambient temperature polymer electrolyte batteries will require new approaches. Hetero-atomic materials combine the better features of several elements to solubilize and transport select Li salts more efficiently than traditional ethylene oxide-type polymers. Ambient temperature ionic conductivities of >1 + 10-3 S/cm are common with this class of polymer electrolyte. Rationale of this approach and material properties are presented.
IT 518359-81-4D, lithium complexes 518359-84-7D, lithium complexes
(phosphorous-containing polyester electrolytes for lithium batteries)
RN 518359-81-4 HCAPLUS
CN Phosphorous acid, trimethyl ester, polymer with 1,2-ethanediol (9CI) (CA INDEX NAME)

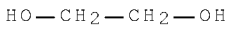
CM 1

CRN 121-45-9
CMF C3 H9 O3 P



CM 2

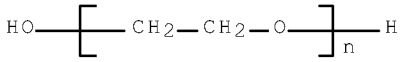
CRN 107-21-1
CMF C2 H6 O2



RN 518359-84-7 HCAPLUS
CN Phosphoric acid, trimethyl ester, polymer with α-hydro-ω-hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

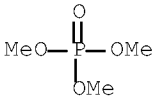
CM 1

CRN 25322-68-3
CMF (C2 H4 O)n H2 O
CCI PMS



CM 2

CRN 512-56-1
CMF C3 H9 O4 P



CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST phosphorous polyester cond polymer electrolyte lithium battery
IT Polyphosphoric acids
(esters; phosphorous-containing polyester electrolytes for lithium batteries)

IT Battery electrolytes
Polymer electrolytes
(phosphorous-containing polyester electrolytes for lithium batteries)
IT Polyesters, uses
(phosphorus-containing; phosphorous-containing polyester electrolytes for lithium batteries)
IT 90076-65-6, Lithium bis(trifluoromethyl sulfonyl)imide 132843-44-8, Lithium bis(perfluoroethyl sulfonyl)imide
(electrolyte containing; phosphorous-containing polyester electrolytes for lithium batteries)
IT 7439-93-2D, Lithium, complex with phosphorous-containing polyesters 7791-03-9, Lithium perchlorate (LiClO4)
(electrolyte; phosphorous-containing polyester electrolytes for lithium batteries)
IT 518359-81-4D, lithium complexes 518359-84-7D, lithium complexes
(phosphorous-containing polyester electrolytes for lithium batteries)

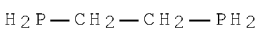
L45 ANSWER 5 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:964987 HCAPLUS Full-text
DOCUMENT NUMBER: 138:26945
TITLE: New heteroatomic polymer for efficient solid polymer electrolytes for lithium batteries
INVENTOR(S): Morris, Robert Scott; Dixon, Brian Gilbert
PATENT ASSIGNEE(S): Phoenix Innovation, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 6 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20020192563	A1	20021219	US 2001-837740 <--	20010417
US 6727343	B2	20040427		
PRIORITY APPLN. INFO.:			US 2001-837740 <--	20010417

ED Entered STN: 20 Dec 2002
AB A new type of polymer is described that represents a new composition of matter. This polymer contains alternating electroneg. group III-VI elements connected with hydrocarbon or fluorocarbon linkages to form a polyalkyl or polyfluoroalkyl heteroat. polymer. These polymers can be combined with lithium salts to form a solid polymer electrolyte for use in electrochem. systems such as batteries. These new solid polymer electrolytes exhibit lithium cation diffusion and lithium cation transport nos. that are superior to similar solid polymer electrolytes composed of polyethylene oxide.
IT 478309-19-2P 478309-21-6P
(heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)
RN 478309-19-2 HCAPLUS
CN 1,2-Ethanediol, polymer with 1,2-ethanediylbis[phosphine] (9CI) (CA INDEX NAME)

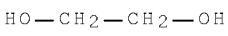
CM 1

CRN 5518-62-7
CMF C2 H8 P2



CM 2

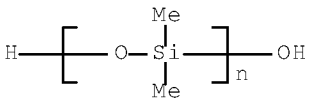
CRN 107-21-1
CMF C2 H6 O2



RN 478309-21-6 HCAPLUS
CN Phosphoric trichloride, polymer with α-hydro-ω-hydroxypoly[oxy(dimethylsilylene)] and α-hydro-ω-hydroxypoly(oxy-1,2-ethanediyl) (CA INDEX NAME)

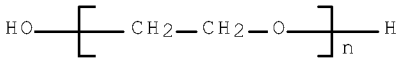
CM 1

CRN 31692-79-2
CMF (C2 H6 O Si)n H2 O
CCI PMS



CM 2

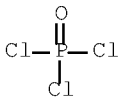
CRN 25322-68-3
CMF (C2 H4 O)n H2 O
CCI PMS



CM 3

CRN 10025-87-3

CMF Cl3 O P



IC ICM H01M010-40
ICS C08J005-20
INCL 429314000; 429317000; 429316000; 521025000
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
ST lithium battery heteroatomic polymer electrolyte
IT Polyoxyalkylenes, uses
(fluorine- and sulfo-containing, ionomers; heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)
IT Battery electrolytes
Polymer electrolytes
(heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)
IT Alkali metal salts
Phosphonium compounds
Quaternary ammonium compounds, uses
(heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)
IT Primary batteries
(lithium; heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)
IT Fluoropolymers, uses
(polyoxyalkylene-, sulfo-containing, ionomers; heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)
IT Ionomers
(polyoxyalkylenes, fluorine- and sulfo-containing; heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)
IT 66796-30-3, Nafion 117
(heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)
IT 7791-03-9, Lithium perchlorate 90076-65-6 132843-44-8
(heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)
IT 478309-19-2P 478309-20-5P 478309-21-6P
(heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)

L45 ANSWER 6 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:904593 HCAPLUS Full-text
DOCUMENT NUMBER: 138:15239
TITLE: Ion conductive polymer electrolyte, its manufacture, and secondary nonaqueous electrolyte battery
INVENTOR(S): Abe, Toshihiro; Sumita, Miwa
PATENT ASSIGNEE(S): Hitachi Maxell Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002343133	A	20021129	JP 2001-149581 <--	20010518

PRIORITY APPLN. INFO.: JP 2001-149581 <-- 20010518

ED Entered STN: 29 Nov 2002

AB The **electrolyte** is a polymer containing quaternary phosphonium salt units of the formula (PR1R2R3)+ X- [R1-3 = Me, Et, n-Pr, iso-Pr, n-Bu, n-C5H13 (sic), Ph, p-methylphenyl, and/or p-fluorophenyl groups; X- = Cl, Br, I, NO3, ClO4, PF6, AsF6, SCN, BF4, (CF3SO2)2N, or (C2F5SO2)2N, p-trifluoromethylphbenzenesulfonate, p-toluenesulfonate, benzotriazine, or EtPS2 groups] attached to the mol. The **electrolyte** is prepared by hardening a liquid mixture, containing a polymerizable monomer having the quaternary phosphonium salt group at the end, a compound having ≥2 polymerizable functional groups, and an **electrolyte** salt.

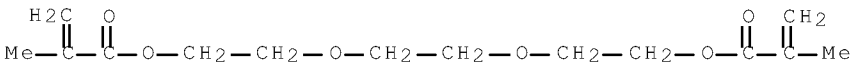
IT **477247-59-9P 477281-67-7P 477281-68-8P**
(compns. and manufacture of ion conductive quaternary phosphonium salt polymer **electrolytes** for secondary lithium **batteries**)

RN 477247-59-9 HCAPLUS

CN Phosphonium, tributyl[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, tetrafluoroborate(1-), polymer with 1,2-ethanediylbis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

CRN 109-16-0
CMF C14 H22 O6

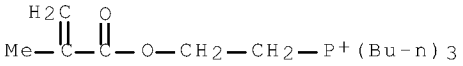


CM 2

CRN 477247-58-8
CMF C18 H36 O2 P . B F4

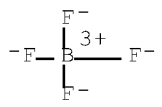
CM 3

CRN 477247-57-7
CMF C18 H36 O2 P



CM 4

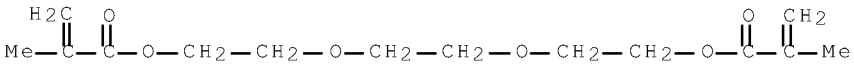
CRN 14874-70-5
CMF B F4
CCI CCS



RN 477281-67-7 HCAPLUS
CN Phosphonium, tributyl[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, O,O-diethyl phosphorodithioate (1:1), polymer with 1,2-ethanediylbis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

CRN 109-16-0
CMF C14 H22 O6

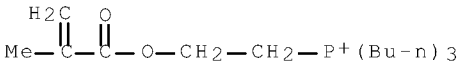


CM 2

CRN 477281-66-6
CMF C18 H36 O2 P . C4 H10 O2 P S2

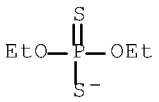
CM 3

CRN 477247-57-7
CMF C18 H36 O2 P



CM 4

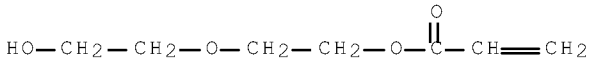
CRN 40898-92-8
CMF C4 H10 O2 P S2



RN 477281-68-8 HCAPLUS
CN Phosphonium, tributyl[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, O,O-diethyl phosphorodithioate (1:1), polymer with 1,2-ethanediylbis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) and 2-(2-hydroxyethoxy)ethyl 2-propenoate (9CI) (CA INDEX NAME)

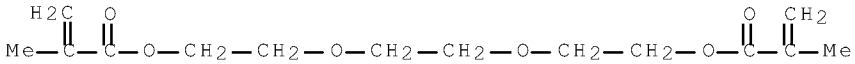
CM 1

CRN 13533-05-6
CMF C7 H12 O4



CM 2

CRN 109-16-0
CMF C14 H22 O6

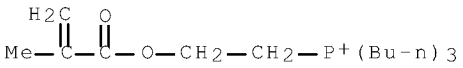


CM 3

CRN 477281-66-6
CMF C18 H36 O2 P . C4 H10 O2 P S2

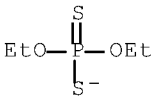
CM 4

CRN 477247-57-7
CMF C18 H36 O2 P



CM 5

CRN 40898-92-8
CMF C4 H10 O2 P S2



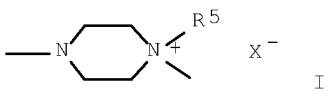
IC ICM H01B001-06
ICS H01B001-12; H01M010-40
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST secondary battery quaternary phosphoniumn salt polymer electrolyte manuf
IT Battery electrolytes
(compns. and manufacture of ion conductive quaternary phosphonium salt polymer electrolytes for secondary lithium batteries)
IT 96-49-1P, Ethylene carbonate 108-32-7P, Propylene carbonate 112-36-7P, Diethylene glycol, diethyl ether 14283-07-9P, Lithium fluoroborate 30714-78-4P, Ethyl butyl carbonate 477247-59-9P 477281-67-7P 477281-68-8P
(compns. and manufacture of ion conductive quaternary phosphonium salt polymer electrolytes for secondary lithium batteries)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L45 ANSWER 7 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:886243 HCAPLUS Full-text
DOCUMENT NUMBER: 137:387083
TITLE: Nonaqueous gel composition containing crosslinked polymer having alkylammonium or piperazinium structure and electrochemical cell
INVENTOR(S): Aizawa, Wakana; Ikegami, Koshiro; Takada, Masakazu; Takaoka, Kazuchiyo
PATENT ASSIGNEE(S): Mitsubishi Paper Mills, Ltd., Japan; Nippon Unicar Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

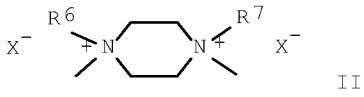
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 2002332417	A	20021122	JP 2001-138273 <--	20010509
PRIORITY APPLN. INFO.:			JP 2001-138273 <--	20010509

ED Entered STN: 22 Nov 2002
GI



I



II

AB The title gel composition comprises a polymer having a crosslinked structure R1NX, R2NYNX2, R4NYNX, I, or II [R1-R7 = (substituted) C1-9 alkyl; X = monovalent inorg. or organic acid or its equivalent; Y = C1-8 alkylene, alkylene oxide, or xylylene]. The composition, especially suitable for secondary Li batteries and capacitors, has high resistance to free acids generated in an electrolyte solution

IT 476013-44-2P 476013-47-5P
(nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)

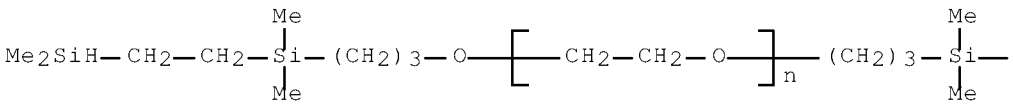
RN 476013-44-2 HCAPLUS

CN Piperazinium, 1,4-bis[(4-ethenylphenyl)methyl]-1-methyl-, hexafluorophosphate(1-), polymer with α,α'-[1,2-ethanediylbis[(dimethylsilylene)-3,1-propanediyl]]bis[ω-[3-[[2-(dimethylsilyl)ethyl]dimethylsilyl]propoxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

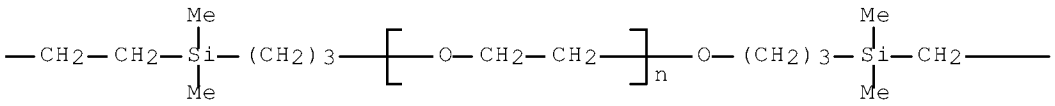
CM 1

CRN 455947-50-9
CMF (C2 H4 O)n (C2 H4 O)n C30 H74 O2 Si6
CCI PMS

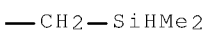
PAGE 1-A



PAGE 1-B



PAGE 1-C

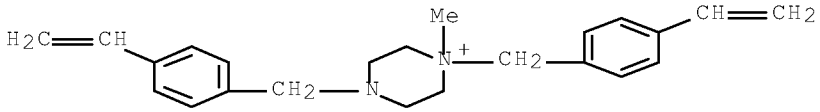


CM 2

CRN 476013-43-1
CMF C23 H29 N2 . F6 P

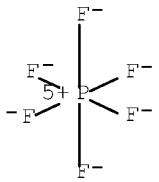
CM 3

CRN 476013-42-0
CMF C23 H29 N2



CM 4

CRN 16919-18-9
CMF F6 P
CCI CCS



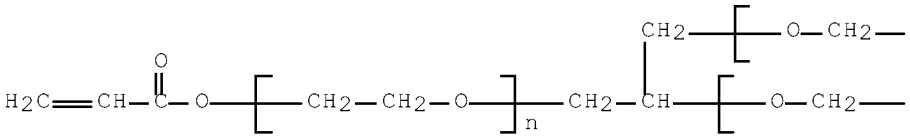
RN 476013-47-5 HCAPLUS
CN Piperazinium, 4,4'-(1,3-propanediyl)bis[1-[(4-ethenylphenyl)methyl]-1-ethyl-, bis[hexafluorophosphate(1-)], polymer with

α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and α,α',α''-1,2,3-propanetriyltris[ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

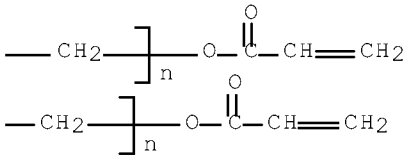
CM 1

CRN 101661-95-4
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C12 H14 O6
CCI PMS

PAGE 1-A

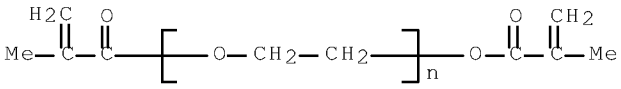


PAGE 1-B



CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



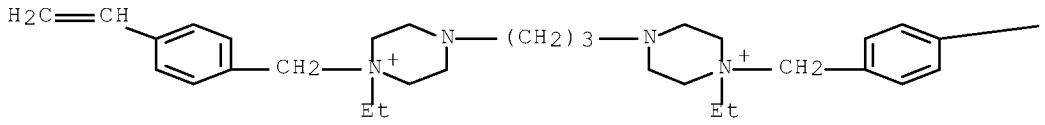
CM 3

CRN 476013-46-4
CMF C33 H50 N4 . 2 F6 P

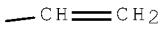
CM 4

CRN 476013-45-3
CMF C33 H50 N4

PAGE 1-A

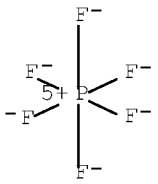


PAGE 1-B



CM 5

CRN 16919-18-9
CMF F6 P
CCI CCS



IC ICM C08L101-02
ICS H01B001-06; H01G009-025; H01M010-40
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38, 76
ST alkylammonium crosslinked polymer electrolyte capacitor; piperazinium crosslinked polymer nonaq electrolyte battery
IT Capacitors
(double layer; nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)
IT Secondary batteries
(lithium; nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)
IT Battery electrolytes
Crosslinking agents
Electrolytic capacitors
Polymer electrolytes
(nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)
IT Quaternary ammonium compounds, uses

(polymers; nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)

IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 429-06-1, Tetraethylammonium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate
(composition containing; nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)

IT 1072-63-5DP, N-Vinylimidazole, polymers with alkylammonium compound and piperazinium compound 1337-81-1DP, Vinylpyridine, polymers with vinyl monomer and piperazinium compound 52352-11-1DP, Vinylbenzylamine, alkylammonium fluorophosphates, polymers with piperazinium compound 476013-44-2P 476013-47-5P 476013-48-6DP, polymers with vinyl monomer and piperazinium compound 476013-50-0DP, polymers with vinyl monomer
(nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)

L45 ANSWER 8 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:711001 HCAPLUS Full-text
DOCUMENT NUMBER: 137:235232
TITLE: Fluoroalkyl-containing phosphonic acid polymers, their manufacture, and their use in polymer electrolytes and secondary lithium ion batteries
INVENTOR(S): Sawada, Hideo; Kyokane, Jun; Sugiya, Tadashi; Ryukoku, Eiichi
PATENT ASSIGNEE(S): Nippon Chemical Industrial Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002265539	A	20020918	JP 2001-72303 <--	20010314
PRIORITY APPLN. INFO.:			JP 2001-72303 <--	20010314

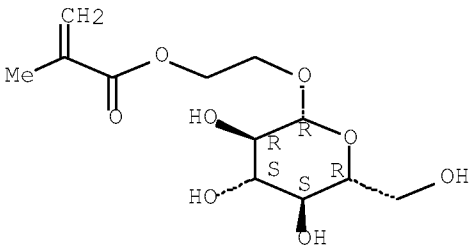
ED Entered STN: 19 Sep 2002
AB The polymers are represented by R1[CH2C(COC2H4Z)R3]nAbR2 {R1, R2 = (CF2)nY, CF(CF3)[OCF2CF(CF3)]pOC3F7; Y = H, F, Cl; Z = glucosyloxy; n = 1-10; p= 0-10; R3 = H, Me; A = phosphonoethylene; a:b mol ratio = 1:99-99:1} and manufactured by reacting fluoroalkanoyl peroxides with 2-glucosyloxyethyl (meth)acrylates and vinylphosphonic acids. The polymer electrolytes using the polymers show high ion conductivity
IT 459409-02-0DP, fluoroalkyl-terminated, Li complexes
(fluoroalkyl-containing phosphonic acid polymers and their manufacture for polymer electrolytes in secondary lithium ion batteries)
RN 459409-02-0 HCAPLUS
CN β-D-Glucopyranoside, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl, polymer with ethenylphosphonic acid (9CI) (CA INDEX NAME)

CM 1

CRN 47087-43-4

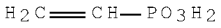
CMF C12 H20 O8

Absolute stereochemistry.



CM 2

CRN 1746-03-8
CMF C2 H5 O3 P



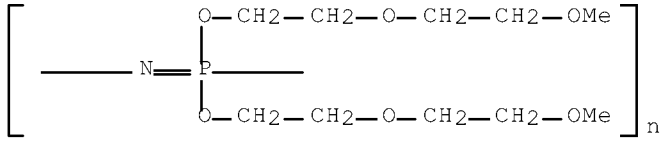
IC ICM C08F220-20
ICS C08F230-02; H01B001-06; H01B001-12; H01M010-40
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
ST fluoroalkyl phosphonic acid polymer electrolyte lithium battery; glycosyloxyethyl methacrylate polymer electrolyte lithium battery; vinylphosphonic acid polymer electrolyte lithium battery; fluoroalkanoyl peroxide polymer electrolyte lithium battery
IT Polymer electrolytes
(fluoroalkyl-containing phosphonic acid polymers and their manufacture for polymer electrolytes in secondary lithium ion batteries)
IT Secondary batteries
(lithium; fluoroalkyl-containing phosphonic acid polymers and their manufacture for polymer electrolytes in secondary lithium ion batteries)
IT 7439-93-2DP, Lithium, fluoroalkyl-terminated methacrylic vinylphosphonic polymer complexes
(fluoroalkyl-containing phosphonic acid polymers and their manufacture for polymer electrolytes in secondary lithium ion batteries)
IT 56347-79-6DP, Diperfluoro-2-methyl-3-oxahexanoyl peroxide, reaction products with methacrylic vinylphosphonic acid polymers, Li complexes 459409-02-0DP, fluoroalkyl-terminated, Li complexes
(fluoroalkyl-containing phosphonic acid polymers and their manufacture for polymer electrolytes in secondary lithium ion batteries)
IT 133414-70-7DP, reaction products with methacrylic vinylphosphonic acid polymers
(fluoroalkyl-containing phosphonic acid polymers and their manufacture for polymer electrolytes in secondary lithium ion batteries)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L45 ANSWER 9 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:575465 HCAPLUS Full-text
DOCUMENT NUMBER: 137:143037
TITLE: Method for preparing thin fiber-structured polymer web
INVENTOR(S): Lee, Wha Seop; Jo, Seong Mu; Chun, Suk Won; Choi, Sung Won
PATENT ASSIGNEE(S): S. Korea
SOURCE: U.S. Pat. Appl. Publ., 8 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20020100725	A1	20020801	US 2001-14550 <--	20011214
KR 2002063020	A	20020801	KR 2001-3685 <--	20010126
JP 2002249966	A	20020906	JP 2001-382608 <--	20011217
CN 1367276	A	20020904	CN 2002-102522 <--	20020125

PRIORITY APPLN. INFO.: KR 2001-3685 A 20010126 <--

ED Entered STN: 02 Aug 2002
AB Disclosed is a method for preparing a thin fiber-structured polymer web suitable for a high-speed and large-scale production using electrospinning. The method uses an electrospinning process to spin a solution containing a polymer in a volatile solvent to obtain a thin fiber-structured polymer web on a collector, in which case the temperature of the polymer solution is in the range of from 40° to the b.p. of the solvent. The porous, thin fiber-structured polymer web thus obtained is applicable to the isolation layer or the electrolytic layer for lithium-ion secondary battery , lithium-metal secondary battery or sulfur-based secondary battery, the isolation layer for fuel cells, filter, and so forth.
IT 98973-15-0, Poly(bis-(2-(2-methoxy-ethoxyethoxy))phosphazene
(method for preparing thin fiber-structured polymer web)
RN 98973-15-0 HCAPLUS
CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA INDEX NAME)



IC ICM B01D039-08
INCL 210503000
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 37, 47

ST battery electrolyte layer fiber structured polymer web; sulfur based secondary battery fiber structured polymer web; lithium secondary battery fiber structured polymer web; fuel cell fiber structured polymer web; filter fiber structured polymer web

IT Secondary batteries
(lithium; method for preparing thin fiber-structured polymer web)

IT Battery electrolytes
Coal tar pitch
Filters
Fuel cells
Petroleum pitch
Secondary batteries
Sensors
(method for preparing thin fiber-structured polymer web)

IT 9002-86-2, Polyvinyl chloride 9002-88-4, Polyethylene 9002-89-5, Polyvinyl alcohol 9002-98-6, PolyAziridine 9003-20-7, Polyvinyl acetate 9003-55-8, Butadiene-styrene copolymer 9004-34-6, Cellulose, uses 9004-35-7, Cellulose acetate 9004-36-8 9011-08-9 9011-14-7, Pmma 9011-17-0, Hexafluoropropylene-vinylidene fluoride copolymer 24937-16-4, Nylon 12 24937-79-9, Pvdf 24980-34-5, Ethylene sulfide polymer 24980-41-4, Caprolactone homopolymer 25014-41-9, Polyacrylonitrile 25038-59-9, Polyethylene terephthalate, uses 25085-53-4, Isotactic polypropylene 25086-89-9, Vinyl acetate-vinyl pyrrolidone copolymer 25233-30-1, Polyaniline 25322-69-4, Polypropylene oxide 25569-53-3, Poly(ethylene succinate) 25749-57-9 26063-00-3, Polyhydroxybutyrate) 26100-51-6, Polylactic acid 26124-68-5, Polyglycolic acid 27083-66-5, Poly(propylene fumarate) 34346-01-5, Glycolic acid-DL-lactic acid copolymer 50327-22-5 98973-15-0, Poly(bis-(2-(2-methoxy-ethoxyethoxy))phosphazene 98973-15-0, Meep
(method for preparing thin fiber-structured polymer web)

OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

L45 ANSWER 10 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:559863 HCAPLUS Full-text

DOCUMENT NUMBER: 137:265521

TITLE: Computational chemistry: Design and experimental verification of pre-designed heteropolymer electrolytes for rechargeable lithium batteries

AUTHOR(S): Dixon, Brian G.; Morris, R. Scott

CORPORATE SOURCE: Phoenix Innovation, Inc., West Wareham, MA, 02576, USA

SOURCE: PMSE Preprints (2002), 87, 127-128
CODEN: PPMRA9; ISSN: 1550-6703

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal; (computer optical disk)

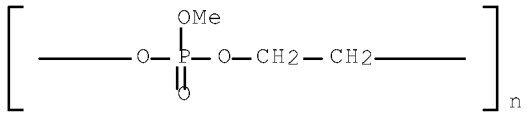
LANGUAGE: English

ED Entered STN: 29 Jul 2002

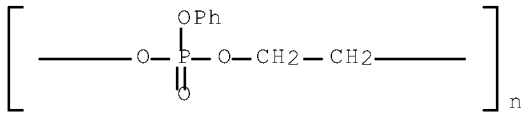
AB The use of computational chemical for designing and evaluating the performance of potential systems as a function of chemical structure (both the polymer and the salt), solvent, and temperature is described. New polymer structures were modeled using mol. dynamics simulations to estimate the rate of diffusion of lithium cations (as well as the anion) through a polymer matrix. Promising candidates were screened by structure and then synthesized and electrochem. characterized. These predictive studies can significantly enhance the rate of return of an associated exptl. program.

IT 59199-82-5 85337-87-7 159508-08-4
461671-69-2
(use of computational chemical for design and exptl. verification of pre-designed heteropolymer electrolytes for rechargeable lithium batteries)

RN 59199-82-5 HCAPLUS
CN Poly[oxy(methoxyphosphinylidene)oxy-1,2-ethanediyl] (CA INDEX NAME)



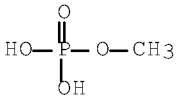
RN 85337-87-7 HCAPLUS
CN Poly[oxy(phenoxyphosphinylidene)oxy-1,2-ethanediyl] (9CI) (CA INDEX NAME)



RN 159508-08-4 HCAPLUS
CN Phosphoric acid, monomethyl ester, polymer with 1,2-ethanediol (9CI) (CA INDEX NAME)

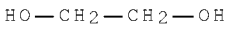
CM 1

CRN 812-00-0
CMF C H5 O4 P



CM 2

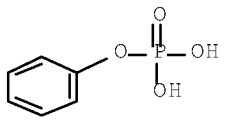
CRN 107-21-1
CMF C2 H6 O2



RN 461671-69-2 HCAPLUS
CN Phosphoric acid, monophenyl ester, polymer with 1,2-ethanediol (9CI) (CA INDEX NAME)

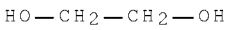
CM 1

CRN 701-64-4
CMF C6 H7 O4 P



CM 2

CRN 107-21-1
CMF C2 H6 O2



CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
ST mol dynamic simulation polymer electrolyte design lithium battery
IT Simulation and Modeling
(mol. dynamics; use of computational chemical for design and exptl. verification of pre-designed heteropolymer electrolytes for rechargeable lithium batteries)
IT Battery electrolytes
(use of computational chemical for design and exptl. verification of pre-designed heteropolymer electrolytes for rechargeable lithium batteries)
IT Polyoxyalkylenes, uses
Polyoxymethylenes, uses
(use of computational chemical for design and exptl. verification of pre-designed heteropolymer electrolytes for rechargeable lithium batteries)
IT 7447-41-8, Lithium chloride, uses 7791-03-9, Lithium perchlorate
(electrolyte; use of computational chemical for design and exptl. verification of pre-designed heteropolymer electrolytes for rechargeable lithium batteries)
IT 25322-68-3, Polyethylene oxide 25322-69-4, Polypropylene oxide 59199-82-5 85337-87-7 159508-08-4 461671-69-2
(use of computational chemical for design and exptl. verification of pre-designed heteropolymer electrolytes for rechargeable lithium batteries)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L45 ANSWER 11 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:518117 HCAPLUS Full-text
DOCUMENT NUMBER: 137:81368
TITLE: Alkaline battery containing surfactant film for electrolyte leakage prevention
INVENTOR(S): Matsuhisa, Ichiro; Adachi, Koji; Umebayashi, Takayuki
PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002198015	A	20020712	JP 2000-396009	20001226
			<--	
JP 3814480	B2	20060830		
PRIORITY APPLN. INFO.:			JP 2000-396009	20001226
			<--	

ED Entered STN: 12 Jul 2002

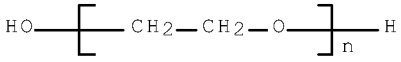
AB The title battery is equipped with a synthetic resin-made gasket for sealing an opening of a battery case, a current collector inserted in a boss part of the gasket, and an electrolyte solution filled in the case, where three-phase interface of the boss, the current collector, and the electrolyte solution is covered with a film containing a surfactant. Preferably, the surfactant is an anionic surfactant or a nonionic surfactant. The battery is prevented from electrolyte leakage caused by deterioration of the gasket.

IT 9056-42-2D, Polyoxyethylene phosphate, potassium salt
25852-91-9D, Polyoxyethylene phosphate, potassium salt
(alkaline battery containing surfactant film for preventing electrolyte leakage at gasket)

RN 9056-42-2 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-hydro-ω-hydroxy-, phosphate (CA INDEX NAME)

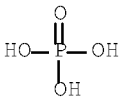
CM 1

CRN 25322-68-3
CMF (C2 H4 O)n H2 O
CCI PMS

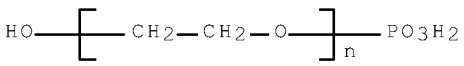


CM 2

CRN 7664-38-2
CMF H3 O4 P



RN 25852-91-9 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-phosphono-ω-hydroxy- (CA INDEX NAME)



IC ICM H01M002-08
ICS H01M002-08; H01M006-08
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST alk battery surfactant film gasket leakage prevention
IT Gaskets
Primary batteries
(alkaline battery containing surfactant film for preventing electrolyte leakage at gasket)
IT Surfactants
(anionic; alkaline battery containing surfactant film for preventing electrolyte leakage at gasket)
IT Polyamides, uses
(gaskets; alkaline battery containing surfactant film for preventing electrolyte leakage at gasket)
IT Surfactants
(nonionic; alkaline battery containing surfactant film for preventing electrolyte leakage at gasket)
IT 7664-38-2D, Phosphoric acid, alkyl esters, potassium salts
9056-42-2D, Polyoxyethylene phosphate, potassium salt
25852-91-9D, Polyoxyethylene phosphate, potassium salt
(alkaline battery containing surfactant film for preventing electrolyte leakage at gasket)

L45 ANSWER 12 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:868873 HCAPLUS Full-text
DOCUMENT NUMBER: 136:9101
TITLE: Fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method
INVENTOR(S): Yun, Kyung Suk; Cho, Byung Won; Cho, Won Il; Kim, Hyung Sun; Kim, Un Seok
PATENT ASSIGNEE(S): Korea Institute of Science and Technology, S. Korea
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001091222	A1	20011129	WO 2000-KR515 <--	20000522
W: JP, KR, US				
PRIORITY APPLN. INFO.:			WO 2000-KR515 <--	20000522

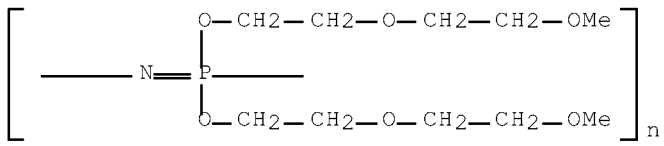
ED Entered STN: 30 Nov 2001

AB The present invention provides a lithium secondary battery and its fabrication method. More particularly, the present invention provides a lithium secondary battery comprising a porous polymer electrolyte and its fabrication method, wherein the polymer electrolyte is fabricated by the following process: (a) dissolving at least one polymer with plasticizers and organic electrolyte solvents to obtain at least one polymeric electrolyte solution; (b) adding the obtained polymeric electrolyte solution to a barrel of a spray machine, and (c) spraying the polymeric electrolyte solution onto a substrate using a nozzle to form a porous polymer electrolyte film. The lithium secondary battery of the present invention has advantages of better adhesion with electrodes, good mech. strength, better performance at low and high temps., and better compatibility with organic electrolytes of a lithium secondary battery.

IT 98973-15-0, Poly[bis(2-(2-methoxyethoxyethoxy))-phosphazene]
(fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)

RN 98973-15-0 HCAPLUS

CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA INDEX NAME)



IC ICM H01M010-38

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38

ST polymer electrolyte lithium secondary battery; spray method fabrication polymer electrolyte lithium secondary battery

IT Inductance
(electrostatic, spray method; fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)

IT Battery electrolytes
Lamination
Plasticizers
Polymer electrolytes
(fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)

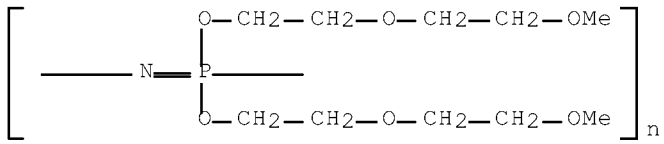
IT Fluoropolymers, uses
Polyoxyalkylenes, uses
(fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)

IT Fluoropolymers, uses
(filling agent; fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)
IT Secondary batteries
(lithium; fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)
IT Alcohols, uses
(plasticizer; fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)
IT Coating process
(spray; fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)
IT 79-20-9, Methyl acetate 105-37-3, Ethyl propionate 109-99-9, Thf, uses 141-78-6, Ethyl acetate, uses 554-12-1, Methyl propionate 7782-42-5, Graphite, uses 7791-03-9, Lithium perchlorate 9002-86-2, Pvc 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-20-7, Polyvinyl acetate 9004-34-6, Cellulose, uses 9004-35-7, Cellulose acetate 9004-36-8 9004-39-1, Cellulose acetate propionate 9010-76-8, Acrylonitrile-vinylidene chloride copolymer 9010-88-2, Ethyl acrylate-methylmethacrylate copolymer 9011-14-7, Pmma 9011-17-0, Hexafluoropropylene-vinylidene fluoride copolymer 12190-79-3, Cobalt lithium oxide colio2 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 24937-79-9, Pvdf 24968-79-4, Acrylonitrile-methyl acrylate copolymer 24980-34-5, Polyethylenesulfide 25014-41-9, Polyacrylonitrile 25086-89-9, Vinyl acetate-vinyl pyrrolidone copolymer 25322-68-3, Peo 25322-69-4, Polypropylene oxide 25667-11-2, Polyethylenesuccinate 26913-06-4, Poly[imino(1,2-ethanediyl)] 28726-47-8, Poly(oxymethylene-oxyethylene) 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 98973-15-0 , Poly[bis(2-(2-methoxyethoxyethoxy))-phosphazene]
(fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)
IT 554-13-2, Lithium carbonate 1304-28-5, Barium oxide bao, uses 1309-48-4, Magnesia, uses 1310-65-2, Lithium hydroxide 1313-59-3, Sodium oxide, uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 7789-24-4, Lithium fluoride, uses 9002-84-0, Ptfe 12003-67-7, Aluminum lithium oxide allio2 12047-27-7, Barium titanium oxide batio3, uses 12057-24-8, Lithia, uses 13463-67-7, Titania, uses 26134-62-3, Lithium nitride
(filling agent; fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)
IT 67-64-1, Acetone, uses 67-68-5, Dmso, uses 68-12-2, Dmf, uses 80-73-9, 1,3-Dimethyl-2-imidazolidinone 96-48-0, Butyrolactone 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 110-71-4, 1,2-Dimethoxyethane 127-19-5, n,n-Dimethyl acetamide 143-24-8, Tetraethylene glycol dimethyl ether 616-38-6, Dimethyl carbonate 623-53-0, Ethyl methyl carbonate 872-50-4, n-Methyl-2-pyrrolidone, uses 4437-85-8, Butylene carbonate 26101-52-0
(plasticizer; fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 13 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:868872 HCAPLUS Full-text
DOCUMENT NUMBER: 136:9100
TITLE: A lithium secondary **battery** comprising composite polymer **electrolyte** fabricated by a spray method
INVENTOR(S): Yun, Kyung Suk; Cho, Byung Won; Cho, Won Il; Kim, Hyung Sun; Kim, Un Seok
PATENT ASSIGNEE(S): Korea Institute of Science and Technology, S. Korea
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001091221	A1	20011129	WO 2000-KR514 <--	20000522
W: JP, KR, US				
PRIORITY APPLN. INFO.:			WO 2000-KR514 <--	20000522

ED Entered STN: 30 Nov 2001
AB The present invention provides a novel composite polymer **electrolyte**, lithium secondary **battery** comprising the composite polymer **electrolyte** and their fabrication methods. More particularly, the present invention provides the composite polymer **electrolyte** comprising a porous polymer **electrolyte** matrix with particles, fibers or mixture thereof having diams. of 1-3000 nm, polymers and lithium salt-dissolved organic **electrolyte** solns. incorporated into the porous polymer matrix. The composite polymer **electrolyte** of the present invention has advantages of better adhesion with **electrodes**, good mech. strength, better performance at low and high temps., better compatibility with organic **electrolytes** of lithium secondary **battery** and it can be applied to the manufacture of lithium secondary **batteries**.
IT 98973-15-0, Poly[bis(2-(2-methoxyethoxyethoxy))phosphazene] (lithium secondary **battery** comprising composite polymer **electrolyte** fabricated by spray method)
RN 98973-15-0 HCAPLUS
CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA INDEX NAME)



IC ICM H01M010-38
CC 52-2 (**Electrochemical**, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
ST lithium secondary **battery** composite polymer **electrolyte**; spray method fabrication composite polymer **electrolyte**

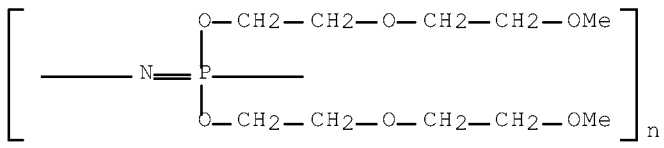
IT Inductance
(electrostatic induction spray; lithium secondary battery comprising composite polymer electrolyte fabricated by spray method)
IT Fluoropolymers, uses
(filling agent; lithium secondary battery comprising composite polymer electrolyte fabricated by spray method)
IT Battery electrolytes
Plasticizers
Polymer electrolytes
(lithium secondary battery comprising composite polymer electrolyte fabricated by spray method)
IT Fluoropolymers, uses
Polyoxyalkylenes, uses
(lithium secondary battery comprising composite polymer electrolyte fabricated by spray method)
IT Secondary batteries
(lithium; lithium secondary battery comprising composite polymer electrolyte fabricated by spray method)
IT Alcohols, uses
(plasticizer; lithium secondary battery comprising composite polymer electrolyte fabricated by spray method)
IT Coating process
(spray; lithium secondary battery comprising composite polymer electrolyte fabricated by spray method)
IT 554-13-2, Lithium carbonate 1304-28-5, Barium oxide bao, uses 1309-48-4, Magnesia, uses 1310-65-2, Lithium hydroxide 1313-59-3, Sodium oxide na2o, uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 7789-24-4, Lithium fluoride, uses 9002-84-0, Ptfe 12003-67-7, Aluminum lithium oxide allio2 12047-27-7, Barium titanium oxide batio3, uses 12057-24-8, Lithia, uses 13463-67-7, Titania, uses 26134-62-3, Lithium nitride
(filling agent; lithium secondary battery comprising composite polymer electrolyte fabricated by spray method)
IT 79-20-9, Methyl acetate 96-48-0, γ-Butyrolactone 96-49-1, Ethylene carbonate 105-37-3, Ethyl propionate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 109-99-9, Thf, uses 110-71-4, 1,2-Dimethoxyethane 127-19-5, Dimethyl acetamide 141-78-6, Ethyl acetate, uses 554-12-1, Methyl propionate 616-38-6, Dimethyl carbonate 623-53-0, Ethyl methyl carbonate 4437-85-8, Butylene carbonate 7782-42-5, Graphite, uses 7791-03-9, Lithium perchlorate 9002-86-2, Pvc 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-20-7, Polyvinyl acetate 9004-34-6, Cellulose, uses 9004-35-7, Cellulose acetate 9004-36-8 9004-39-1, Cellulose acetate propionate 9010-76-8, Acrylonitrile-vinylidene chloride copolymer 9010-88-2, Ethyl acrylate-methyl methacrylate copolymer 9011-14-7, Pmma 9011-17-0, Hexafluoropropylene-vinylidenefluoride copolymer 12190-79-3, Cobalt lithium oxide colio2 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 24937-79-9, Pvdf 24968-79-4, Acrylonitrile-methylacrylate copolymer 24980-34-5, Polyethylene sulfide 25014-41-9, Polyacrylonitrile 25086-89-9, Vinyl acetate-vinylpyrrolidone copolymer 25322-68-3, Peo 25322-69-4, Polypropylene oxide 25667-11-2, Polyethylenesuccinate 25721-76-0, Polyethylene glycol dimethacrylate 26913-06-4, Poly[imino(1,2-ethanediyl)] 28726-47-8, Poly(oxymethylene-oxyethylene) 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 98973-15-0 , Poly[bis(2-(2-methoxyethoxyethoxy))phosphazene]
(lithium secondary battery comprising composite polymer

electrolyte fabricated by spray method)
IT 67-64-1, Acetone, uses 67-68-5, Dmso, uses 68-12-2, Dmf, uses 80-73-9, 1,3-Dimethyl-2-imidazolidinone 143-24-8, Tetraethylene glycol dimethyl ether 872-50-4, n-Methyl-2-pyrrolidone, uses 26101-52-0
(plasticizer; lithium secondary battery comprising composite polymer electrolyte fabricated by spray method)
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 14 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:868871 HCAPLUS Full-text
DOCUMENT NUMBER: 136:9099
TITLE: Fabrication of a lithium secondary battery comprising a hybrid polymer electrolyte prepared by a spray method
INVENTOR(S): Yun, Kyung Suk; Cho, Byung Won; Cho, Won Il; Kim, Hyung Sun; Kim, Un Seok
PATENT ASSIGNEE(S): Korea Institute of Science and Technology, S. Korea
SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001091220	A1	20011129	WO 2000-KR513 <--	20000522
W: JP, KR, US				
PRIORITY APPLN. INFO.:			WO 2000-KR513 <--	20000522

ED Entered STN: 30 Nov 2001
AB The present invention provides a novel hybrid polymer electrolyte, a lithium secondary battery comprising the hybrid polymer electrolyte and their fabrication methods. More particularly, the present invention provides the hybrid polymer electrolyte comprising a porous polymer matrix with particles, fibers or mixture thereof having diams. of 1-3000 nm, polymers and lithium salt-dissolved organic electrolyte solns. incorporated into the porous polymer matrix. The hybrid polymer electrolyte has advantages of better adhesion with electrodes, good mech. strength, better performance at low- and high-temps., better compatibility with organic electrolytes of a lithium secondary battery and it can be applied to the manufacture of lithium secondary batteries.
IT 98973-15-0, Poly[bis(2-(2-methoxyethoxyethoxy))phosphazene]
(fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)
RN 98973-15-0 HCAPLUS
CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA INDEX NAME)



IC ICM H01M010-38
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
ST lithium secondary battery hybrid polymer electrolyte ; spray method hybrid polymer electrolyte lithium secondary battery
IT Inductance
(electrostatic, spray method; fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)
IT Battery electrolytes
Plasticizers
Polymer electrolytes
(fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)
IT Fluoropolymers, uses
Polyoxyalkylenes, uses
(fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)
IT Fluoropolymers, uses
(filling agent; fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)
IT Secondary batteries
(lithium; fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)
IT Alcohols, uses
(plasticizer; fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)
IT Coating process
(spray; fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)
IT 79-20-9, Methyl acetate 96-48-0, γ-Butyrolactone 96-49-1, Ethylene carbonate 105-37-3, Ethyl propionate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 109-99-9, Thf, uses 110-71-4, 1,2-Dimethoxyethane 127-19-5, Dimethyl acetamide 141-78-6, Ethyl acetate, uses 554-12-1, Methyl propionate 616-38-6, Dimethyl carbonate 623-53-0, Ethyl methyl carbonate 4437-85-8, Butylene carbonate 7782-42-5, Graphite, uses 7791-03-9, Lithium perchlorate 9002-86-2, Pvc 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-20-7, Polyvinyl acetate 9004-34-6, Cellulose, uses 9004-35-7, Cellulose acetate 9004-36-8 9004-39-1, Cellulose acetate propionate 9010-76-8, Acrylonitrile-vinylidene chloride copolymer 9010-88-2, Ethyl acrylate-methyl methacrylate copolymer 9011-14-7, Pmma 9011-17-0, Hexafluoropropylene-vinylidene fluoride copolymer 12190-79-3, Cobalt lithium oxide colio2 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 24936-67-2, Polyethylene sulfide 24937-79-9, Polyvinylidene fluoride 24968-79-4, Acrylonitrile-methylacrylate copolymer 25014-41-9, Polyacrylonitrile 25086-89-9, Vinyl acetate-vinylpyrrolidone copolymer 25322-68-3, Peo 25322-69-4, Polypropylene oxide 25667-11-2, Polyethylene succinate 26570-48-9, Polyethylene glycol diacrylate 26913-06-4,

Poly[imino(1,2-ethanediyl)] 28726-47-8, Poly(oxymethyleneoxyethylene) 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 98973-15-0, Poly[bis(2-(2-methoxyethoxyethoxy))phosphazene]
(fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)

IT 68-12-2, Dmf, uses 872-50-4, n-Methyl-2-pyrrolidone, uses 26101-52-0
(fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)

IT 554-13-2, Lithium carbonate 1304-28-5, Barium oxide bao, uses 1309-48-4, Magnesia, uses 1310-65-2, Lithium hydroxide 1313-59-3, Sodium oxide na2o, uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 7789-24-4, Lithium fluoride, uses 9002-84-0, Ptfe 12003-67-7, Aluminum lithium oxide allio2 12047-27-7, Barium titanium oxide batio3, uses 12057-24-8, Lithia, uses 13463-67-7, Titania, uses 26134-62-3, Lithium nitride
(filling agent; fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)

IT 67-64-1, Acetone, uses 67-68-5, Dmso, uses 80-73-9, 1,3-Dimethyl-2-imidazolidinone 143-24-8, Tetraethylene glycol dimethyl ether
(plasticizer; fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 15 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:851557 HCAPLUS Full-text
DOCUMENT NUMBER: 135:374196
TITLE: Fabrication of a lithium secondary battery comprising a superfine fibrous polymer electrolyte
INVENTOR(S): Yun, Kyung Suk; Cho, Byung Won; Jo, Seong Mu; Lee, Wha Seop; Cho, Won Il; Park, Kun You; Kim, Hyung Sun; Kim, Un Seok; Ko, Seok Ku; Chun, Suk Won; Choi, Sung Won
PATENT ASSIGNEE(S): Korea Institute of Science and Technology, S. Korea
SOURCE: PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001089023	A1	20011122	WO 2000-KR501 <--	20000519

W: JP, KR, US

PRIORITY APPLN. INFO.: WO 2000-KR501 <-- 20000519

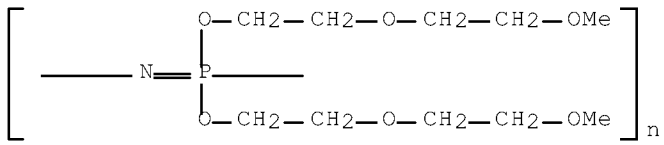
ED Entered STN: 23 Nov 2001

AB The present invention provides a lithium secondary battery and its fabrication method. More particularly, the present invention provides a lithium secondary battery comprising super fine fibrous porous polymer electrolyte and its preparation method, wherein the polymer electrolyte is fabricated by the following process: (a) dissolving at least one polymer with plasticizers and y organic electrolyte solvents to obtain at least one polymeric electrolyte solution; (b) adding the obtained polymeric electrolyte solution to a barrel of an electrospinning machine; and, (c) electropinning the polymeric electrolyte solution onto a substrate using a nozzle to form a polymer electrolyte film. The lithium secondary battery of the present invention has advantages of better adhesion with electrodes, good mech. strength, better performance at low and high temps., and better compatibility with organic electrolytes of a lithium secondary battery.

IT 98973-15-0, Poly[bis(2-(2-methoxyethoxyethoxy)phosphazene]
(fabrication of lithium secondary battery comprising superfine fibrous polymer electrolyte)

RN 98973-15-0 HCAPLUS

CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA INDEX NAME)



IC ICM H01M010-40

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38

ST lithium secondary battery superfine fibrous polymer electrolyte

IT Battery electrolytes
Plasticizers
Polymer electrolytes
(fabrication of lithium secondary battery comprising superfine fibrous polymer electrolyte)

IT Fluoropolymers, uses
Polyoxyalkylenes, uses
(fabrication of lithium secondary battery comprising superfine fibrous polymer electrolyte)

IT Fluoropolymers, uses
(filling agent; fabrication of lithium secondary battery comprising superfine fibrous polymer electrolyte)

IT Secondary batteries
(lithium; fabrication of lithium secondary battery comprising superfine fibrous polymer electrolyte)

IT Alcohols, uses
(plasticizer; fabrication of lithium secondary battery comprising superfine fibrous polymer electrolyte)

IT Fibers
(spinning, electrospinning; fabrication of lithium secondary battery comprising superfine fibrous polymer electrolyte)

IT 79-20-9, Methyl acetate 105-37-3, Ethyl propionate 109-99-9, Thf, uses 141-78-6, Ethyl acetate, uses 554-12-1, Methyl propionate

7791-03-9, Lithium perchlorate 9002-86-2, Pvc 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-20-7, Polyvinyl acetate 9004-34-6, Cellulose, uses 9004-35-7, Cellulose acetate 9004-36-8 9004-39-1, Cellulose acetate propionate 9010-76-8, Acrylonitrile-vinylidene chloride copolymer 9010-88-2, Ethyl acrylate-methyl methacrylate copolymer 9011-14-7, Pmma 9011-17-0, Hexafluoropropylene-vinylidene fluoride copolymer 12190-79-3, Cobalt lithium oxide colio2 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 24936-67-2, Polyethylenesulfide 24937-79-9, Pvdf 24968-79-4, Acrylonitrile-methylacrylate copolymer 25014-41-9, Polyacrylonitrile 25086-89-9, Vinyl acetate-vinylpyrrolidone copolymer 25266-14-2, Oxyethylene-oxymethylene copolymer 25322-68-3, Peo 25322-69-4, Polypropylene oxide 25569-53-3, Polyethylenesuccinate 26913-06-4, Poly[imino(1,2-ethanediyl)] 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 90973-15-0, Poly[bis(2-(2-methoxyethoxyethoxy)phosphazene]
(fabrication of lithium secondary battery comprising superfine fibrous polymer electrolyte)

IT 7631-86-9, Silica, uses 26101-52-0
(fabrication of lithium secondary battery comprising superfine fibrous polymer electrolyte)

IT 13463-67-7, Titania, uses
(filling agent; fabrication of lithium secondary battery comprising superfine fibrous polymer electrolyte)

IT 554-13-2, Lithium carbonate 1304-28-5, Barium oxide bao, uses 1309-48-4, Magnesia, uses 1310-65-2, Lithium hydroxide 1313-59-3, Sodium oxide, uses 1344-28-1, Alumina, uses 7789-24-4, Lithium fluoride, uses 9002-84-0, Ptfe 12003-67-7, Aluminum lithium oxide allio2 12047-27-7, Barium titanium oxide batio3, uses 12057-24-8, Lithia, uses 26134-62-3, Lithium nitride
(filling agent; fabrication of lithium secondary battery comprising superfine fibrous polymer electrolyte)

IT 67-64-1, Acetone, uses 67-68-5, Dmso, uses 68-12-2, Dmf, uses 80-73-9, 1,3-Dimethyl-2-imidazolidinone 96-48-0, Butyrolactone 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 110-71-4, 1,2-Dimethoxyethane 127-19-5, n,n-Dimethyl acetamide 143-24-8, Tetraethylene glycol dimethyl ether 616-38-6, Dimethyl carbonate 623-53-0, Ethyl methyl carbonate 872-50-4, N-Methyl-2-pyrrolidone, uses 4437-85-8, Butylene carbonate
(plasticizer; fabrication of lithium secondary battery comprising superfine fibrous polymer electrolyte)

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 16 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:851555 HCAPLUS Full-text

DOCUMENT NUMBER: 135:374194

TITLE: Fabrication of composite polymer electrolyte and a lithium secondary battery comprising the composite polymer electrolyte

INVENTOR(S): Yun, Kyung Suk; Cho, Byung Won; Jo, Seong Mu; Lee, Wha Seop; Cho, Won Il; Park, Kun You; Kim, Hyung Sun; Kim, Un Seok; Ko, Seok Ku; Choi, Sung Won

PATENT ASSIGNEE(S): Korea Institute of Science and Technology, S. Korea; Chun, Suk Won

SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001089021	A1	20011122	WO 2000-KR499 <--	20000519

W: JP, KR, US
PRIORITY APPLN. INFO.: WO 2000-KR499 <-- 20000519

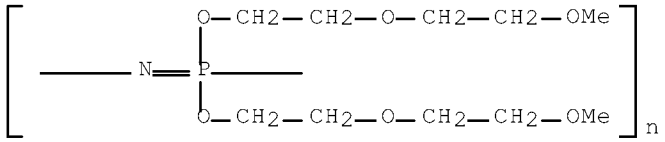
ED Entered STN: 23 Nov 2001

AB The present invention provides a novel composite polymer **electrolyte**, lithium secondary **battery** comprising the composite polymer **electrolyte** and their fabrication methods. More particularly, the present invention provides the composite polymer **electrolyte** comprising super fine fibrous porous polymer **electrolyte** matrix with particles having diameter of 1-3000 nm, polymers and lithium salt-dissolved organic **electrolyte** solns. incorporated into the porous polymer **electrolyte** matrix. The composite polymer **electrolyte** of the present invention has advantages of better adhesion with **electrodes**, good mech. strength, better performance at low and high temps., better compatibility with organic **electrolytes** of lithium secondary **battery** and it can be applied to the manufacture of lithium secondary **batteries**.

IT 98973-15-0
(fabrication of composite polymer **electrolyte** and lithium secondary **battery** comprising composite polymer **electrolyte**)

RN 98973-15-0 HCAPLUS

CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA INDEX NAME)



IC ICM H01M010-40

CC 52-2 (**Electrochemical**, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38

ST lithium secondary **battery** composite polymer **electrolyte**

IT **Battery electrolytes**
Plasticizers
Polymer **electrolytes**
(fabrication of composite polymer **electrolyte** and lithium secondary **battery** comprising composite polymer **electrolyte**)

IT Fluoropolymers, uses
Polyoxyalkylenes, uses
(fabrication of composite polymer **electrolyte** and lithium secondary **battery** comprising composite polymer

electrolyte)

IT Fluoropolymers, uses
(filling agent; fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)

IT Secondary batteries
(lithium; fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)

IT Alcohols, uses
(plasticizer; fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)

IT Fibers
(spinning, electro-; fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)

IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 616-38-6, Dimethyl carbonate 623-53-0, Ethyl methyl carbonate 7782-42-5, Graphite, uses 7791-03-9, Lithium perchlorate 9002-86-2, Pvc 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-20-7, Polyvinyl acetate 9004-34-6, Cellulose, uses 9004-35-7, Cellulose acetate 9004-36-8 9004-39-1, Cellulose acetate propionate 9010-76-8, Acrylonitrile-vinylidene chloride copolymer 9010-88-2, Ethyl acrylate-methyl methacrylate copolymer 9011-14-7, Pmma 9011-17-0, Hexafluoropropylene-vinylidene fluoride copolymer 12190-79-3, Cobalt lithium oxide colio2 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 24936-67-2, Polyethylene sulfide 24937-79-9, Pvdf 25014-41-9, Polyacrylonitrile 25086-89-9, Vinyl acetate-vinylpyrrolidone copolymer 25266-14-2 25322-68-3, Peo 25322-69-4, Polypropylene oxide 25569-53-3, Polyethylene succinate 25721-76-0, Polyethylene glycol dimethacrylate 25749-57-9, Acrylonitrile-methacrylic acid copolymer 26570-48-9, Polyethylene glycol diacrylate 26913-06-4, Poly[imino(1,2-ethanediyl)] 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 98973-15-0
(fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)

IT 79-20-9, Methyl acetate 96-48-0, γ-Butyrolactone 105-37-3, Ethyl propionate 109-99-9, Thf, uses 110-71-4, 1,2-Dimethoxyethane 127-19-5, Dimethyl acetamide 141-78-6, Ethyl acetate, uses 554-12-1, Methyl propionate 4437-85-8, Butylene carbonate 12003-67-7, Aluminum lithium oxide allio2
(fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)

IT 554-13-2, Lithium carbonate 1304-28-5, Baria, uses 1309-48-4, Magnesia, uses 1310-65-2, Lithium hydroxide 1313-59-3, Sodium oxide, uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 7789-24-4, Lithium fluoride, uses 9002-84-0, Ptfe 12047-27-7, Barium titanium oxide batio3, uses 12057-24-8, Lithia, uses 13463-67-7, Titania, uses 26134-62-3, Lithium nitride li3n
(filling agent; fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)

IT 67-64-1, Acetone, uses 67-68-5, Dmso, uses 68-12-2, Dmf, uses 80-73-9, 1,3-Dimethyl-2-imidazolidinone 143-24-8, Tetraethylene glycol dimethyl ether 872-50-4, n-Methyl-2-pyrrolidone, uses 26101-52-0

(plasticizer; fabrication of composite polymer **electrolyte** and lithium secondary **battery** comprising composite polymer **electrolyte**)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 17 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:851554 HCAPLUS Full-text

DOCUMENT NUMBER: 135:374193

TITLE: Fabrication method of lithium secondary **battery** with hybrid polymer **electrolyte**

INVENTOR(S): Yun, Kyung Suk; Cho, Byung Won; Jo, Seong Mu; Lee, Wha Seop; Cho, Won Il; Park, Kun You; Kim, Hyung Sun; Kim, Un Seok; Ko, Seok Ku; Chun, Suk Won; Choi, Sung Won

PATENT ASSIGNEE(S): Korea Institute of Science and Technology, S. Korea

SOURCE: PCT Int. Appl., 41 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001089020	A1	20011122	WO 2000-KR498 <--	20000519
W: JP, KR, US				
JP 2003533861	T	20031111	JP 2001-585342 <--	20000519
JP 4108981	B2	20080625		
US 20090026662	A1	20090129	US 2008-180509 <--	20080725
PRIORITY APPLN. INFO.:			WO 2000-KR498 W <--	20000519
			US 2003-276878 B3	20030522

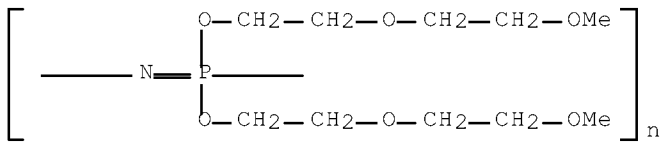
ED Entered STN: 23 Nov 2001

AB The present invention provides a novel hybrid polymer **electrolyte**, a lithium secondary **battery** comprising the hybrid polymer **electrolyte** polymer and their fabrication methods. More particularly, the present invention provides the hybrid polymer **electrolyte** comprising superfine fibrous porous polymer matrix with particles having diameter of 1-3000 nm, polymers and lithium salt-dissolved organic **electrolyte** solns. incorporated into the porous polymer matrix. The hybrid polymer **electrolyte** has advantages of better adhesion with **electrodes**, good mech. strength, better performance at low and high temps., better compatibility with organic **electrolytes** of a lithium secondary **battery** and it can be applied to the manufacture of lithium secondary **batteries**.

IT 98973-15-0
(fabrication method of lithium secondary **battery** with hybrid polymer **electrolyte**)

RN 98973-15-0 HCAPLUS

CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA INDEX NAME)



IC ICM H01M010-40
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
ST lithium secondary battery hybrid polymer electrolyte
IT Battery electrolytes
Plasticizers
Polymer electrolytes
(fabrication method of lithium secondary battery with hybrid polymer electrolyte)
IT Fluoropolymers, uses
Polyoxyalkylenes, uses
(fabrication method of lithium secondary battery with hybrid polymer electrolyte)
IT Fluoropolymers, uses
(filling agent; fabrication method of lithium secondary battery with hybrid polymer electrolyte)
IT Secondary batteries
(lithium; fabrication method of lithium secondary battery with hybrid polymer electrolyte)
IT Alcohols, uses
(plasticizer; fabrication method of lithium secondary battery with hybrid polymer electrolyte)
IT Fibers
(spinning, electro-; fabrication method of lithium secondary battery with hybrid polymer electrolyte)
IT 79-20-9, Methyl acetate 96-48-0, γ-Butyrolactone 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 109-99-9, Thf, uses 110-71-4, 1,2-Dimethoxyethane 127-19-5, Dimethyl acetamide 141-78-6, Ethyl acetate, uses 554-12-1, Methyl propionate 616-38-6, Dimethyl carbonate 623-53-0, Ethylmethyl carbonate 4437-85-8, Butylene carbonate 7782-42-5, Graphite, uses 7791-03-9, Lithium perchlorate 9002-86-2, Pvc 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-20-7, Polyvinyl acetate 9004-34-6, Cellulose, uses 9004-35-7, Cellulose acetate 9004-36-8 9004-39-1, Cellulose acetate propionate 9010-76-8, Acrylonitrile-vinylidene chloride copolymer 9010-88-2, Ethyl acrylate-methyl methacrylate copolymer 9011-14-7, Pmma 9011-17-0, Hexafluoropropylene-vinylidene fluoride copolymer 12190-79-3, Cobalt lithium oxide colio2 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 24937-79-9, Pvdf 24980-34-5, Polyethylene sulfide 25014-41-9, Polyacrylonitrile 25086-89-9 25266-14-2, Oxyethylene-oxymethylene copolymer 25322-68-3, Peo 25322-69-4, Polypropylene oxide 25569-53-3, Polyethylene succinate 25721-76-0, Polyethylene glycol dimethacrylate 25749-57-9, Acrylonitrile-methacrylic acid copolymer 26570-48-9, Polyethylene glycol diacrylate 26913-06-4, Poly[imino(1,2-ethanediyl)] 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 98973-15-0

(fabrication method of lithium secondary battery with hybrid polymer electrolyte)

IT 554-13-2, Lithium carbonate 1304-28-5, Baria, uses 1309-48-4, Magnesia, uses 1310-65-2, Lithium hydroxide 1313-59-3, Sodiumoxide, uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 7789-24-4, Lithium fluoride, uses 9002-84-0, Ptfe 12003-67-7, Aluminum lithium oxide allio2 12047-27-7, Barium titanium oxide batio3, uses 12057-24-8, Lithia, uses 13463-67-7, Titania, uses 26134-62-3, Lithium nitride li3n
(filling agent; fabrication method of lithium secondary battery with hybrid polymer electrolyte)

IT 67-64-1, Acetone, uses 67-68-5, Dmso, uses 68-12-2, Dmf, uses 80-73-9, 1,3-Dimethyl-2-imidazolidinone 143-24-8, Tetraethylene glycol dimethyl ether 872-50-4, n-Methyl-2-pyrrolidone, uses 26101-52-0
(plasticizer; fabrication method of lithium secondary battery with hybrid polymer electrolyte)

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 18 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:840790 HCAPLUS Full-text

DOCUMENT NUMBER: 135:374144

TITLE: Nickel/hydrogen battery

INVENTOR(S): Maeda, Reizo; Harada, Yasuyuki; Tanaka, Tadayoshi; Niiyama, Katsuhiko; Matsuura, Yoshinori; Noma, Toshiyuki; Yonetsu, Ikuo

PATENT ASSIGNEE(S): Sanyo Electric Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001319684	A	20011116	JP 2000-136799 <--	20000510
JP 4079573	B2	20080423		

PRIORITY APPLN. INFO.: JP 2000-136799 <-- 20000510

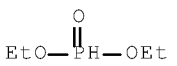
ED Entered STN: 19 Nov 2001

AB The battery contains a phosphate ester and/or a phosphonate ester. The ester may exist in the battery anode or electrolyte.

IT 762-04-9, Di ethyl phosphonate 26912-43-6
(phosphate ester and phosphonate ester additives in electrolyte solns. and anodes for nickel/hydrogen batteries)

RN 762-04-9 HCAPLUS

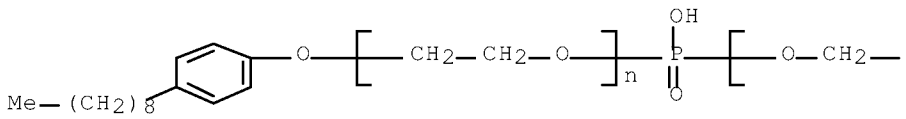
CN Phosphonic acid, diethyl ester (CA INDEX NAME)



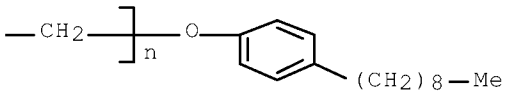
RN 26912-43-6 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α,α'-phosphinicobis[ω-(4-nonylphenoxy)- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM H01M010-30
ICS H01M010-30; H01M004-24; H01M004-62

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST nickel hydrogen battery ester additive; anode ester additive nickel hydrogen battery; electrolyte ester additive nickel hydrogen battery; phosphate ester additive nickel hydrogen battery; phosphonate ester additive nickel hydrogen battery

IT Battery electrolytes
(electrolyte solns. containing phosphate ester and phosphonate ester additives for nickel/hydrogen batteries)

IT Battery anodes
(hydrogen absorbing alloy anodes containing phosphate ester and phosphonate ester additives in nickel batteries)

IT Secondary batteries
(phosphate ester and phosphonate ester additives in electrolyte solns. and anodes for nickel/hydrogen batteries)

IT 1310-58-3, Potassium hydroxide, uses
(electrolyte solns. containing phosphate ester and phosphonate ester additives for nickel/hydrogen batteries)

IT 1333-74-0, Hydrogen, uses 151974-13-9
(hydrogen absorbing alloy anodes containing phosphate ester and phosphonate ester additives in nickel batteries)

IT 126-73-8, Tributyl phosphate, uses 512-56-1, Trimethyl phosphate 762-04-9, Di ethyl phosphonate 838-85-7, Diphenyl phosphate 1623-19-4, Triallyl phosphate 1809-19-4, Dibutyl phosphonate 2197-63-9, Dihexadecyl phosphate 7423-32-7, Phosphoric acid monododecyl ester disodium salt 17176-77-1, Dibenzyl phosphonate 21302-09-0 26444-49-5, Cresyl diphenyl phosphate

26912-43-6 37310-83-1, Oleyl phosphate
(phosphate ester and phosphonate ester additives in electrolyte solns. and anodes for nickel/hydrogen batteries)

L45 ANSWER 19 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:771032 HCAPLUS Full-text
DOCUMENT NUMBER: 135:320499
TITLE: Separators for electrochemical cells
INVENTOR(S): Carlson, Steven A.; Ying, Qicong; Deng, Zhongyi; Skotheim, Terje A.
PATENT ASSIGNEE(S): Moltech Corporation, USA
SOURCE: U.S., 18 pp., Cont.-in-part of U.S. 6,153,337. CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6306545	B1	20011023	US 1998-215112 <--	19981217
US 6153337	A	20001128	US 1997-995089 <--	19971219
US 20020092155	A1	20020718	US 2001-40651 <--	20011022
PRIORITY APPLN. INFO.:			US 1997-995089 <--	A2 19971219
			US 1998-215112 <--	A1 19981217

ED Entered STN: 24 Oct 2001
AB This invention pertains to separators for electrochem. cells which comprise a microporous pseudo-boehmite layer; electrolyte elements comprising such separators; elec. current producing cells comprising such separators; and methods of making such separators, electrolyte elements and cells.
IT 211431-21-9, Escure kto
(separators for electrochem. cells)
RN 211431-21-9 HCAPLUS
CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer, mixt. with diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, (4-methylphenyl)phenylmethanone and phenyl(2,4,6-trimethylphenyl)methanone (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

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CRN 75980-60-8
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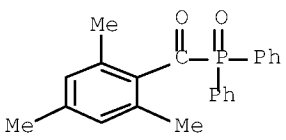
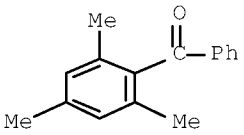


CM 2

CRN 954-16-5
CMF C16 H16 O



CM 3

CRN 134-84-9
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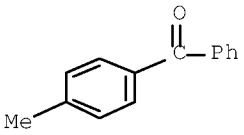
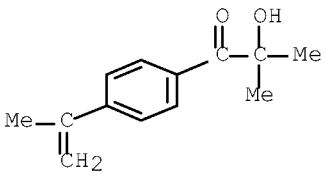


CM 4

CRN 115055-18-0
CMF (C13 H16 O2)x
CCI PMS

CM 5

CRN 101649-40-5
CMF C13 H16 O2



IC ICM H01M002-16
ICS C04B035-10
INCL 429247000

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38, 72
ST separator electrochem cell; battery separator microporous pseudoboehmite layer
IT Conducting polymers
Crosslinking agents
Crosslinking catalysts
Dispersing agents
Pigments, nonbiological
Plasticizers
Porosity
Secondary batteries
Secondary battery separators
Surfactants
(separators for electrochem. cells)
IT 57-55-6, Propylene glycol, uses 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 67-63-0, Isopropanol, uses 71-23-8, 1-Propanol, uses 71-36-3, 1-Butanol, uses 78-92-2, 2-Butanol 107-21-1, Ethylene glycol, uses 109-86-4, 2-Methoxyethanol 110-80-5, 2-Ethoxyethanol 111-76-2, 2-Butoxyethanol 7732-18-5, Water, uses 25038-59-9, Melinex 516, uses 211431-21-9, Escure kto 221629-51-2, CN984
(separators for electrochem. cells)
OS.CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 20 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:614280 HCAPLUS Full-text
DOCUMENT NUMBER: 135:168869
TITLE: Protective coating for separators for electrochemical cells
INVENTOR(S): Ying, Qicong; Carlson, Steven A.; Skotheim, Terje A.
PATENT ASSIGNEE(S): Moltech Corporation, USA
SOURCE: U.S., 29 pp., Cont.-in-part of U.S. 6,183,901.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6277514	B1	20010821	US 1999-447901 <--	19991123
US 6194098	B1	20010227	US 1998-215029 <--	19981217
US 6183901	B1	20010206	US 1999-399967 <--	19990921
WO 2000036670	A1	20000622	WO 1999-US30136 <--	19991216

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
WO 2000036671 A1 20000622 WO 1999-US30214 19991216
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RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
EP 1149425 A1 20011031 EP 1999-967395 19991216
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
EP 1151486 A1 20011107 EP 1999-966420 19991216
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EP 1151486 B1 20030521
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
JP 2002532852 T 20021002 JP 2000-588826 19991216
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CN 1173424 C 20041027 CN 1999-815869 19991216
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CN 1175505 C 20041110 CN 1999-815868 19991216
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US 20010053475 A1 20011220 US 2001-898884 20010702
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PRIORITY APPLN. INFO.: US 1998-215029 A2 19981217
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US 1999-399967 A2 19990921
<--
US 1999-447901 A2 19991123
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WO 1999-US30136 W 19991216
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WO 1999-US30214 W 19991216
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ED Entered STN: 23 Aug 2001

AB This invention pertains to separators for use in electrochem. cells which comprise at least one microporous pseudo-boehmite layer, which separator is in contact with at least one protective coating layer positioned on the anode-facing side of the separator opposite from the cathode active layer in the cell; electrolyte elements comprising such separators; elec. current producing cells comprising such separators; and methods of making such separators, electrolyte elements and cells.

IT 211431-21-9, Escure kto
(protective coating for separators for electrochem. cells)

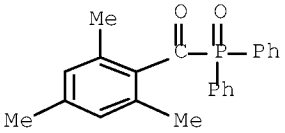
RN 211431-21-9 HCAPLUS

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer, mixt. with diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, (4-methylphenyl)phenylmethanone and phenyl(2,4,6-trimethylphenyl)methanone (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

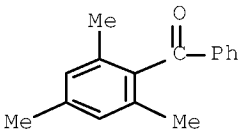
CM 1

CRN 75980-60-8
CMF C22 H21 O2 P



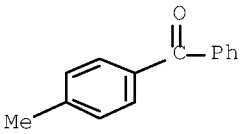
CM 2

CRN 954-16-5
CMF C16 H16 O



CM 3

CRN 134-84-9
CMF C14 H12 O

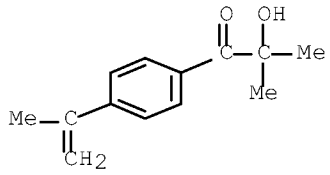


CM 4

CRN 115055-18-0
CMF (C13 H16 O2)x
CCI PMS

CM 5

CRN 101649-40-5
CMF C13 H16 O2



IC ICM H01M002-14
INCL 429129000
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
ST battery separator pseudoboehmite protective coating
IT Coating process
Conducting polymers
Secondary batteries
Secondary battery separators
(protective coating for separators for electrochem. cells)
IT 9003-19-4, Polyvinyl ether 9003-39-8, polyvinylpyrrolidone
9003-63-8, Poly(butyl methacrylate) 10377-52-3, Lithium phosphate
12627-14-4, Lithium silicate 12676-27-6 25067-58-7, Polyacetylene
25190-62-9, Poly(p-phenylene) 28774-98-3, Poly(naphthalene-2,6-diyl)
37220-89-6, Lithium aluminate 39302-37-9, Lithium titanium oxide
82451-56-7, Polyazulene 96638-49-2, Poly(phenylenevinylene)
114239-80-4, Poly(perinaphthalene) 146701-60-2, CAB-O-SIL TS-530
152747-89-2, Lanthanum lithium oxide 184905-46-2, Lithium nitrogen
phosphorus oxide 211431-21-9, Escure kto 236388-73-1,
Lithium silicide sulfide 236388-74-2, Lithium boride sulfide
236388-75-3, Aluminum lithium sulfide 236388-76-4, Lithium phosphide
sulfide 342379-43-5, Germanium lithium sulfide
(protective coating for separators for electrochem. cells)
OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)
REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 21 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:479823 HCAPLUS Full-text
DOCUMENT NUMBER: 135:83350
TITLE: Hyperbranched polymers, their preparation, solid electrolytes therefrom, and electrochemical apparatus therewith
INVENTOR(S): Sato, Masahiro; Tanba, Atsushi; Osawa, Toshiyuki; Oshima, Kentaro
PATENT ASSIGNEE(S): Kansai Research Institute Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001181352	A	20010703	JP 1999-371750	19991227

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PRIORITY APPLN. INFO.: JP 1999-371750 19991227
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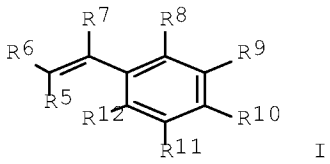
ED Entered STN: 03 Jul 2001
GI



I

AB The polymers, showing high ion conductivity and solid strength, are prepared by polymerization of R1R2C:CR3CO2(CH2CH2O)nR4 (R1-3 = H, C1-4 alkyl; R4 = H, C1-4 alkyl, C1-4 acyl; n = 1-20 integer), I (R5-7 = H, C1-4 alkyl; R8-12 = H, halo, C1-4 (halo)alkyl, where ≥1 of them is C1-4 α-haloalkyl), and optional R13R14C:CR15CO2(CH2CH2O)mP(:O)(OH)2 (R13-15 = H, C1-4 alkyl; m = 1-20 integer). The polymers may be crosslinked with acrylic and/or styrenic crosslinkers. The polymers may be subjected to living radical polymerization offering dendritic graft polymers and may be cation exchanged with Li giving solid **electrolytes** for Li secondary **batteries**.

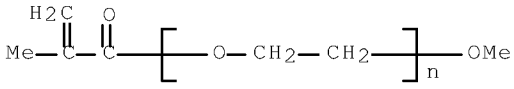
IT **347188-26-5DP**, Li complexes
(dendritic; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity **battery electrolytes**)

RN 347188-26-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(phosphonooxy)ethyl ester, polymer with 1-(chloromethyl)-4-ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

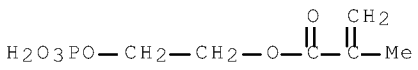
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



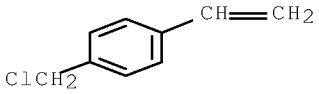
CM 2

CRN 24599-21-1
CMF C6 H11 O6 P



CM 3

CRN 1592-20-7
CMF C9 H9 Cl



IT 347188-28-7DP, Li complexes
(graft; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery electrolytes)
RN 347188-28-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-(2-methoxyethoxy)ethyl ester, polymer with 1-(chloromethyl)-4-ethenylbenzene, 4-ethenylbenzenesulfonic acid and 2-(phosphonooxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

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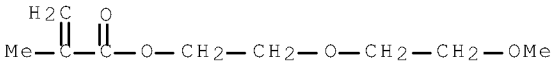
CRN 45103-58-0
CMF C9 H16 O4



CM 2

CRN 24599-21-1
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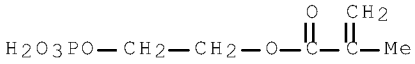
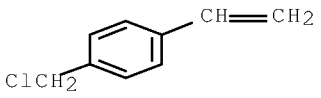


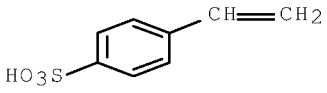
CM 3

CRN 1592-20-7
CMF C9 H9 Cl



CM 4

CRN 98-70-4
CMF C8 H8 O3 S



IC ICM C08F220-28
ICS C08F004-10; C08F212-04; H01G009-028; H01M010-40
CC 72-3 (Electrochemistry)
Section cross-reference(s): 38, 52, 76
ST lithium battery electrolyte ion cond strength; dendritic polyethylene branching polymer battery electrolyte
IT Crosslinking agents
(acrylic and/or styrenic; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery electrolytes)
IT Polyoxyalkylenes, uses
(acrylic, graft, dendritic, Li complexes; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery electrolytes)
IT Electric apparatus
(electrochem.; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery electrolytes)
IT Polymerization
(graft, living radical; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery electrolytes)
IT Dendritic polymers
(graft; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery electrolytes)
IT Secondary batteries
(lithium; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery electrolytes)
IT Polymerization
(living, radical, graft; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery electrolytes)
IT Battery electrolytes
Solid electrolytes
(polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery electrolytes)
IT 152253-76-4DP, Li complexes 347188-26-5DP, Li complexes
347188-27-6DP, Li complexes

(dendritic; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery electrolytes)

IT 347188-28-7DP, Li complexes
(graft; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery electrolytes)

IT 553-26-4D, 4,4'-Bipyridyl, complexes with copper chloride
7758-89-6D, Copper(I) chloride, bipyridyl complexes
(living radical polymerization catalysts; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery electrolytes)

IT 7439-93-2DP, Lithium, polyoxyethylene-branch-bearing dendritic polymer complexes, uses
(polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery electrolytes)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L45 ANSWER 22 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:91433 HCAPLUS Full-text
DOCUMENT NUMBER: 134:134106
TITLE: Protective coating for separators for electrochemical cells
INVENTOR(S): Ying, Qicong; Carlson, Steven A.; Skotheim, Terje A.
PATENT ASSIGNEE(S): Moltech Corporation, USA
SOURCE: U.S., 27 pp., Cont.-in-part of U.S. Ser. No. 215,029.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6183901	B1	20010206	US 1999-399967 <--	19990921
US 6194098	B1	20010227	US 1998-215029 <--	19981217
US 6277514	B1	20010821	US 1999-447901 <--	19991123
WO 2000036670	A1	20000622	WO 1999-US30136 <--	19991216
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
WO 2000036671	A1	20000622	WO 1999-US30214 <--	19991216
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1149425	A1	20011031	EP 1999-967395 <--	19991216
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
EP 1151486	A1	20011107	EP 1999-966420 <--	19991216
EP 1151486	B1	20030521		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002532852	T	20021002	JP 2000-588826 <--	19991216
CN 1173424	C	20041027	CN 1999-815869 <--	19991216
CN 1175505	C	20041110	CN 1999-815868 <--	19991216
US 6410182	B1	20020625	US 2000-641539 <--	20000818
US 20010000485	A1	20010426	US 2000-727160 <--	20001130
US 6423444	B2	20020723		
US 20010053475	A1	20011220	US 2001-898884 <--	20010702
PRIORITY APPLN. INFO.:			US 1998-215029 <--	A2 19981217
			US 1999-399967 <--	A2 19990921
			US 1999-447901 <--	A2 19991123
			WO 1999-US30136 <--	W 19991216
			WO 1999-US30214 <--	W 19991216

ED Entered STN: 07 Feb 2001

AB This invention pertains to separators for electrochem. cells which comprise (i) two microporous pseudo-boehmite layers and (ii) a protective coating layer comprising a polymer interposed between the microporous pseudo-boehmite layers; electrolyte elements comprising such separators; elec. current producing cells comprising such separators; and methods of making such separators, electrolyte elements and cells.

IT 211431-21-9, Escure KTO
(photosensitizer; protective coating for separators for electrochem. cells)

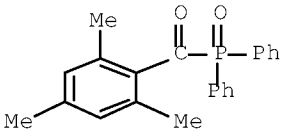
RN 211431-21-9 HCAPLUS

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer, mixt. with diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, (4-methylphenyl)phenylmethanone and phenyl(2,4,6-trimethylphenyl)methanone (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

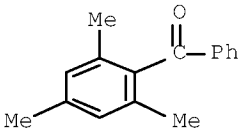
CM 1

CRN 75980-60-8
CMF C22 H21 O2 P



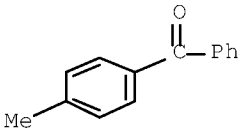
CM 2

CRN 954-16-5
CMF C16 H16 O



CM 3

CRN 134-84-9
CMF C14 H12 O

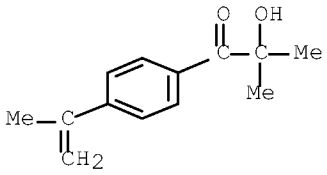


CM 4

CRN 115055-18-0
CMF (C13 H16 O2)x
CCI PMS

CM 5

CRN 101649-40-5
CMF C13 H16 O2

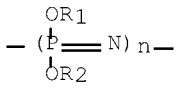


IC ICM H01M002-14
ICS H01M002-16
INCL 429129000
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
ST battery separator pseudoboehmite protective coating
IT Coating materials
Pigments, nonbiological
Primary battery separators
Secondary battery separators
(protective coating for separators for electrochem. cells)
IT 211431-21-9, Escure KTO
(photosensitizer; protective coating for separators for electrochem. cells)
OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)
REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

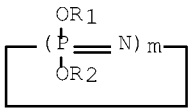
L45 ANSWER 23 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:62800 HCAPLUS Full-text
DOCUMENT NUMBER: 134:134086
TITLE: Nonaqueous electrolyte batteries
INVENTOR(S): Fui, Samu; Tomita, Takashi; Segawa, Takeshi
PATENT ASSIGNEE(S): Sony Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001023687	A	20010126	JP 1999-196532 <--	19990709
PRIORITY APPLN. INFO.:			JP 1999-196532 <--	19990709

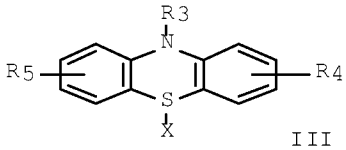
OTHER SOURCE(S): MARPAT 134:134086
ED Entered STN: 26 Jan 2001
GI



I



II

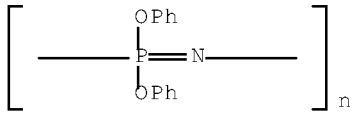


III

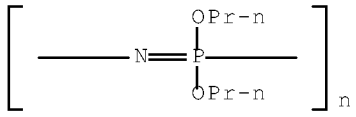
AB Secondary Li batteries have a nonaq. electrolyte solution containing a phosphazene I [R1 and R2 = linear or branched (substituted) alkyl, (substituted) cyclic alkyl, (substituted) alkylene, or(substituted) alkylene oxide groups; n = integer 1-100] and a radical polymerization inhibitor. The phosphazene may be cyclic compound II (m = integer 3-10), and the radical polymerization inhibitor is preferably a S and N containing heterocyclic compound, e.g., III [R3-5 = H, linear or branched (substituted) alkyl, (substituted) cyclic alkyl, (substituted) alkylene, or (substituted), and X = 0-2 atoms].

IT 28212-48-8 28779-94-4 40081-32-1
60495-46-7, Poly[nitrilo(diethoxyphosphoranylidyne)]
98973-15-0 321734-64-9
(electrolyte solns. containing phosphazanes and heterocyclic radical polymerization inhibitors for secondary lithium batteries)

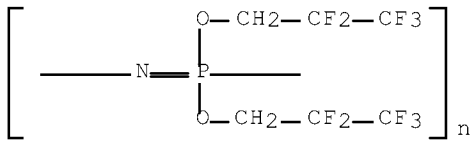
RN 28212-48-8 HCAPLUS
CN Poly[nitrilo(diphenoxyphosphoranylidyne)] (CA INDEX NAME)



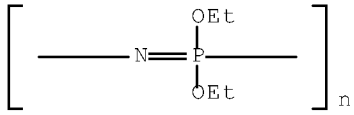
RN 28779-94-4 HCAPLUS
CN Poly[nitrilo(dipropoxyphosphoranylidyne)] (9CI) (CA INDEX NAME)



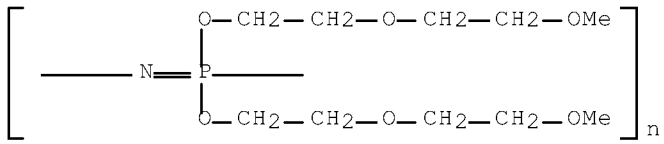
RN 40081-32-1 HCAPLUS
CN Poly[nitrilo[bis(2,2,3,3,3-pentafluoropropoxy)phosphoranylidyne]] (9CI) (CA INDEX NAME)



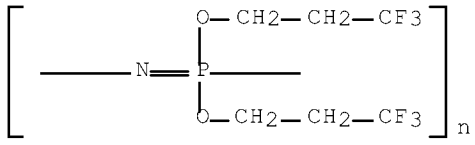
RN 60495-46-7 HCAPLUS
CN Poly[nitrilo(diethoxyphosphoranylidyne)] (9CI) (CA INDEX NAME)



RN 98973-15-0 HCAPLUS
CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA INDEX NAME)



RN 321734-64-9 HCAPLUS
CN Poly[nitrilo[bis(3,3,3-trifluoropropoxy)phosphoranylidyne]] (9CI) (CA INDEX NAME)



IC ICM H01M010-40
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST secondary lithium battery electrolyte phosphazene polymn inhibitor; heterocyclic nitrogen sulfur compd lithium battery electrolyte
IT Battery electrolytes
(electrolyte solns. containing phosphazanes and heterocyclic radical polymerization inhibitors for secondary lithium batteries)

IT 108-32-7, Propylene carbonate 616-38-6, Dimethyl carbonate
(electrolyte solns. containing phosphazanes and heterocyclic radical polymerization inhibitors for secondary lithium batteries)
IT 92-84-2, 10H-Phenothiazine 429-16-3 429-18-5 992-79-0
1207-72-3 1209-66-1 1256-55-9 5116-77-8 28212-40-0
28779-94-4 36409-59-3 40081-32-1 58378-20-4
60495-46-7, Poly[nitrilo(diethoxyphosphoranylidyne)]
98973-15-0 320618-62-0 320618-63-1 321734-64-9
321734-65-0
(electrolyte solns. containing phosphazanes and heterocyclic radical polymerization inhibitors for secondary lithium batteries)
OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L45 ANSWER 24 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:12793 HCAPLUS Full-text
DOCUMENT NUMBER: 134:74037
TITLE: Improved lithium ion polymer electrolytes and methods of manufacturing an electrochemical cell
INVENTOR(S): Munshi, M. Zafar A.
PATENT ASSIGNEE(S): Lithium Power Technologies, Inc., USA
SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001001507	A1	20010104	WO 2000-US16294 <--	20000626
W: AU, BR, CA, CN, ID, IL, IN, JP, KR, MX, SG, VN RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6413676	B1	20020702	US 1999-340944 <--	19990628
JP 2003503822	T	20030128	JP 2001-506631 <--	20000626
US 20030091904	A1	20030515	US 2002-187483 <--	20020702
US 6828065	B2	20041207		
US 20040151985	A1	20040805	US 2002-188339 <--	20020702

PRIORITY APPLN. INFO.: US 1999-340944 A 19990628 <--
WO 2000-US16294 W 20000626 <--

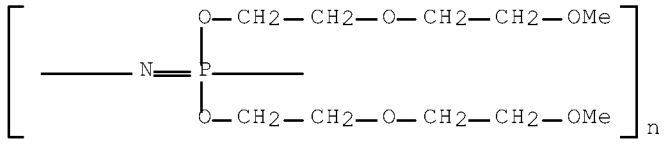
ED Entered STN: 05 Jan 2001
AB A dimensionally stable, highly resilient, hybrid copolymer solid-solution electrolyte-retention film for use in a lithium ion battery in one preferred embodiment has a predominantly amorphous structure and mech. strength despite contact with liquid solvent electrolyte. The film is a thinned (stretched), cast film of a homogeneous blend of two or more polymers, one of which is selected for its pronounced solvent retention properties. A very high surface area inorg. filler dispersed in the blend during formation thereof serves to increase the porosity of the film and thereby enhance electrolyte retention.

The film is soaked in a solution of liquid polymer with liquid organic solvent electrolyte and lithium salt, for absorption thereof. Use of a crosslinked liquid polymer enhances trapping of mols. of the electrolyte into pores of the film. The electrolyte film is sandwiched between flexible active anode and cathode layers to form the lithium ion battery. Novel methods are provided for forming the electrodes, the polymer substrate, and other elements of the battery.

IT 98973-15-0
(improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)

RN 98973-15-0 HCAPLUS

CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA INDEX NAME)



IC ICM H01M006-18

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38

ST battery lithium ion polymer electrolyte

IT Conducting polymers
(Li-doped; improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)

IT Polyacetylenes, uses
Polyanilines
(Li-doped; improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)

IT Battery electrolytes
Electron beams
Polymer electrolytes
UV radiation
(improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)

IT Acrylic polymers, uses
Fluoropolymers, uses
Polycarbonates, uses
Polyesters, uses
Polyoxyalkylenes, uses
Polysiloxanes, uses
Polythiophenylenes
(improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)

IT Secondary batteries
(lithium; improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)

IT Polyoxyalkylenes, uses
(oxymethylene-linked; improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)

IT Urethanes
(trifunctional, crosslinking agent; improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)

IT 25067-58-7, Polyacetylene 25233-30-1, Polyaniline 30604-81-0, Polypyrrole
(Li-doped; improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)
IT 7631-86-9, Fumed silica, uses
(colloidal, filler; improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)
IT 7429-90-5, Aluminum, uses 7440-02-0, Nickel, uses 7440-50-8, Copper, uses 7440-66-6, Zinc, uses 12597-68-1, Stainless steel, uses
(current collector; improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)
IT 1344-28-1, Alumina, uses
(filler; improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)
IT 1332-29-2, Tin oxide 7440-44-0D, Carbon, intercalation compds., uses 9002-84-0, Ptfe 9003-07-0, Polypropylene 9003-11-6, Ethylene oxide-propylene oxide copolymer 9011-14-7, Pmma 11126-15-1, Lithium vanadium oxide 12057-17-9, Lithium manganese oxide LiMn2O4 12423-04-0, Lithium vanadium oxide LiV3O8 24937-79-9, Pvdf 24968-11-4, Polyethylene naphthalate 25014-41-9, Polyacrylonitrile 25038-59-9, Polyethylene terephthalate, uses 25067-61-2, Polymethacrylonitrile 25230-87-9 25322-68-3, Peo 25322-68-3D, Peo, oxymethylene-linked 30871-57-9, Propylene-vinylidene fluoride copolymer 39300-70-4, Lithium nickel oxide 39457-42-6, Lithium manganese oxide 52627-24-4, Cobalt lithium oxide 61673-65-2, Lithium niobium selenide 74245-06-0, Lithium vanadium sulfide 98973-15-0 98973-15-0, Meep 131344-56-4, Cobalt lithium nickel oxide 162684-16-4, Lithium manganese nickel oxide 214536-41-1, Cobalt lithium manganese oxide
(improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)
IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 616-38-6, Dimethyl carbonate 7791-03-9, Lithium perchlorate 14024-11-4, Lithium tetrachloroaluminate 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 90076-65-6, Lithium bis(trifluoromethanesulfonyl)imide 132404-42-3
(improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)
OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 25 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:881475 HCAPLUS Full-text
DOCUMENT NUMBER: 134:44550
TITLE: Methods of preparing electrochemical cells
INVENTOR(S): Carlson, Steven A.
PATENT ASSIGNEE(S): Moltech Corporation, USA
SOURCE: PCT Int. Appl., 83 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000076014	A2	20001214	WO 2000-US15971 <--	20000609
WO 2000076014	A3	20010927		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1214748	A2	20020619	EP 2000-942731 <--	20000609
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
US 6488721	B1	20021203	US 2000-590458 <--	20000609
US 6497780	B1	20021224	US 2000-590457 <--	20000609
US 20030118910	A1	20030626	US 2002-325074 <--	20021220
US 7160603	B2	20070109		
US 20040185335	A1	20040923	US 2004-767631 <--	20040129
US 20070111070	A1	20070517	US 2007-650673 <--	20070108
US 20070110990	A1	20070517	US 2007-650674 <--	20070108
US 20070108120	A1	20070517	US 2007-650675 <--	20070108
PRIORITY APPLN. INFO.:			US 1999-139031P <--	P 19990609
			US 2000-590457 <--	A3 20000609
			WO 2000-US15971 <--	W 20000609
			US 2002-325074 <--	A1 20021220

ED Entered STN: 15 Dec 2000

AB Provided are methods of preparing a cathode/separator assembly for use in electrochem. cells in which a microporous separator layer is coated on a temporary carrier substrate and a cathode active layer is then coated or laminated on the separator layer prior to removing the temporary carrier substrate from the separator layer. The microporous separator layer may comprise one or more microporous xerogel layers. Optionally, the cathode/separator assembly may comprise one or more protective coating layers which are in contact with at least one of the microporous xerogel layers, and one of the protective coating layers may be coated on the temporary carrier substrate prior to coating the separator layer. Also, provided are methods of preparing electrochem. cells utilizing cathode/separator assemblies prepared by such methods, and cathode/separator assemblies and electrochem. cells prepared by such methods.

IT 211431-21-9, Esacure KTO 46
(photosensitizer; methods of preparing electrochem. cells)

RN 211431-21-9 HCAPLUS

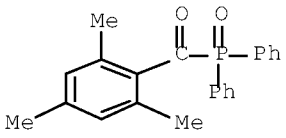
CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer, mixt. with diphenyl(2,4,6-trimethylbenzoyl)phosphine

oxide, (4-methylphenyl)phenylmethanone and
phenyl(2,4,6-trimethylphenyl)methanone (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

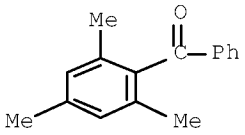
CM 1

CRN 75980-60-8
CMF C22 H21 O2 P



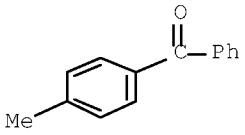
CM 2

CRN 954-16-5
CMF C16 H16 O



CM 3

CRN 134-84-9
CMF C14 H12 O

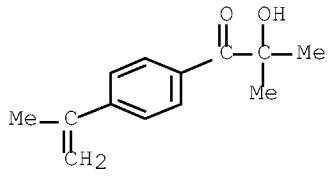


CM 4

CRN 115055-18-0
CMF (C13 H16 O2)x
CCI PMS

CM 5

CRN 101649-40-5
CMF C13 H16 O2



IC ICM H01M002-16
ICS H01M004-04; H01M004-36
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
ST battery cathode separator assembly fabrication
IT Secondary batteries
(lithium; methods of preparing electrochem. cells)
IT Battery cathodes
Conducting polymers
Electric insulators
Paper
Primary battery separators
Secondary battery separators
Xerogels
(methods of preparing electrochem. cells)
IT 211431-21-9, Esacure KTO 46
(photosensitizer; methods of preparing electrochem. cells)
OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 26 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:49109 HCAPLUS Full-text
DOCUMENT NUMBER: 132:110582
TITLE: Nonaqueous secondary batteries
INVENTOR(S): Tomiyama, Hideki
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000021449	A	20000121	JP 1998-186328 <--	19980701
JP 4003298	B2	20071107		
PRIORITY APPLN. INFO.:			JP 1998-186328 <--	19980701

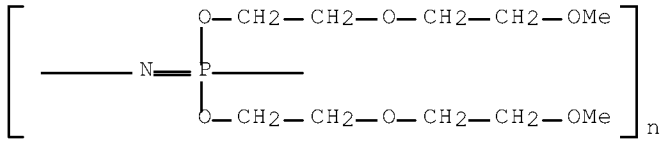
ED Entered STN: 21 Jan 2000

AB The batteries comprise a Li-containing transition metal oxide cathode, a Li-intercalating Si-containing anode, and a electrolyte gel containing (a) organic polymer, (b) non-protonic solvent, and (c) ammonium, alkali metal, or alkaline earth metal salt. The batteries have excellent charge-discharge cycle characteristics.

IT 98973-15-0 255897-46-2
(lithium secondary batteries with polymer gel electrolytes)

RN 98973-15-0 HCAPLUS

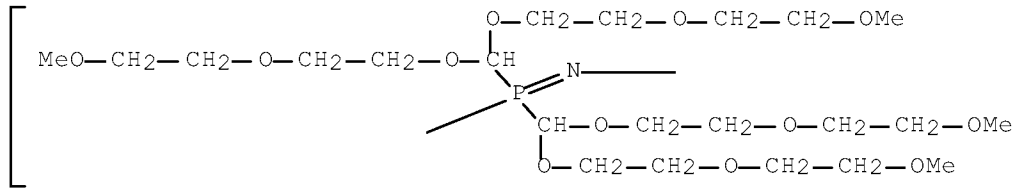
CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA INDEX NAME)



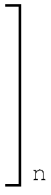
RN 255897-46-2 HCAPLUS

CN Poly[nitrilo[bis[bis[2-(2-methoxyethoxy)ethoxy]methyl]phosphoranylidyne]] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM H01M010-40
ICS H01M010-40; H01M004-02; H01M004-58

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38

ST nonaq secondary battery gel electrolyte; oxyalkylene vinyl polymer gel electrolyte battery

IT Gels
(electrolyte; lithium secondary batteries with polymer gel electrolytes)

IT Battery electrolytes
Polymer electrolytes
Secondary batteries
(lithium secondary batteries with polymer gel electrolytes)

IT Fluoropolymers, uses
Polyoxyalkylenes, uses
(lithium secondary batteries with polymer gel electrolytes)

IT Polyphosphazenes
Polyphosphazenes
Polysiloxanes, uses
Polysiloxanes, uses
(polyoxyalkylene-, graft, lithium complex; lithium secondary batteries with polymer gel electrolytes)

IT Polyoxyalkylenes, uses
Polyoxyalkylenes, uses
(polyphosphazene-, graft, lithium complex; lithium secondary batteries with polymer gel electrolytes)

IT Polyoxyalkylenes, uses
Polyoxyalkylenes, uses
(polysiloxane-, graft, lithium complex; lithium secondary batteries with polymer gel electrolytes)

IT 7440-02-0, Nickel, uses
(-coated silicon anode; lithium secondary batteries with polymer gel electrolytes)

IT 7440-21-3, Silicon, uses 7631-86-9, Silica, uses 193072-79-6
(anode; lithium secondary batteries with polymer gel electrolytes)

IT 12190-79-3, Cobalt lithium oxide (CoLiO2)
(cathode; lithium secondary batteries with polymer gel electrolytes)

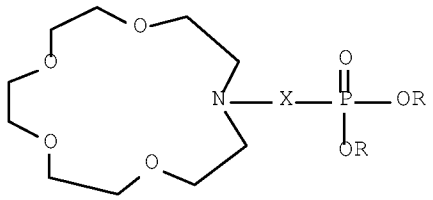
IT 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate
(electrolyte solvent; lithium secondary batteries with polymer gel electrolytes)

IT 21324-40-3, Lithium hexafluorophosphate
(electrolyte; lithium secondary batteries with polymer gel electrolytes)

IT 9003-11-6, Ethylene oxide-propylene oxide copolymer 9011-17-0 24937-79-9, Poly(vinylidene fluoride) 24968-79-4, Acrylonitrile-methyl acrylate copolymer 25014-41-9, Polyacrylonitrile 25067-61-2, Polymethacrylonitrile 25322-68-3 25322-69-4 29613-70-5 50867-60-2, Acrylonitrile-methyl vinyl ether copolymer 98973-15-0 115401-75-7 255897-37-1 255897-39-3 255897-40-6 255897-42-8 255897-44-0 255897-45-1 255897-46-2 255897-47-3 255897-48-4
(lithium secondary batteries with polymer gel electrolytes)

L45 ANSWER 27 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1999:492147 HCAPLUS Full-text
DOCUMENT NUMBER: 131:243318
TITLE: New type of lariat ethers: synthesis and cation binding ability of phosphonoalkyl-azacrown ethers
AUTHOR(S): Keglevich, Gyorgy; Novak, Tibor; Bako, Peter;

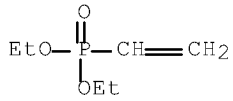
Ujszaszy, Kalman; Ludanyi, Krisztina; Toth, Klara; Toke, Laszlo
CORPORATE SOURCE: Department of Organic Chemical Technology, Technical University of Budapest, Budapest, 1521, Hung.
SOURCE: Journal of Inclusion Phenomena and Macrocyclic Chemistry (1999), 34(3), 299-309
CODEN: JIPCF5
PUBLISHER: Kluwer Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 10 Aug 1999
GI



I

AB The synthesis of azacrown ethers with phosphonoalkyl side chains of two to five carbon atoms, e.g I (R = Et, X = (CH2)n, n = 3-5; R = Me, X = (CH2)3), potentially useful as a new type of cation binding agent, is described. Introduction of the phosphonoalkyl moiety into the parent monoaza-15-crown-5 decreases the cation extraction ability, but results in an increase in the selectivity towards the cations examined The effect of the phosphonoalkyl-azacrown ethers on the properties of membranes used in ion-selective electrodes is also reported.

IT 682-30-4P
(synthesis and cation binding ability of new type of lariat phosphonoalkyl-azacrown ethers)
RN 682-30-4 HCAPLUS
CN Phosphonic acid, P-ethenyl-, diethyl ester (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 80
IT Extraction
Ion-selective electrodes
Membranes, nonbiological
(synthesis and cation binding ability of new type of lariat phosphonoalkyl-azacrown ethers)
IT 682-30-4P 1186-10-3P 5324-30-1P 42757-42-6P

63075-66-1P 121934-92-7P 177342-84-6P
(synthesis and cation binding ability of new type of lariat phosphonoalkyl-azacrown ethers)

OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 28 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1999:327017 HCAPLUS Full-text

DOCUMENT NUMBER: 131:7571

TITLE: Electrochemical power-generating elements

INVENTOR(S): Yoshitake, Masahiro; Yoshida, Naoki; Kunisa, Yasuhiro; Shimodaira, Satoshi

PATENT ASSIGNEE(S): Asahi Glass Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11135135	A	19990521	JP 1997-297514 <--	19971029
PRIORITY APPLN. INFO.:			JP 1997-297514 <--	19971029

ED Entered STN: 27 May 1999

AB The element comprises an ion-exchange membrane made of phosphonic acid group-containing fluorocarbon polymer and containing nonconducting pillar particles, sandwiched between anode and cathode. The structure may be solid electrolyte fuel cells, air-Zn batteries, etc. The ion-exchange membranes can be made thin without causing short circuits.

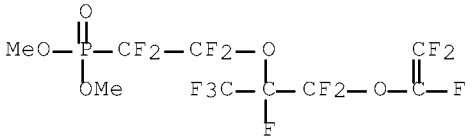
IT 225667-51-6P 225667-53-8P
(phosphonic acid group-containing fluoropolymers containing pillar particles as ion-exchange membranes in electrochem. power generating elements)

RN 225667-51-6 HCAPLUS

CN Phosphonic acid, P-[2-[1-[difluoro[(1,2,2-trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoroethyl]-, dimethyl ester, polymer with 1,1,2,2-tetrafluoroethene (CA INDEX NAME)

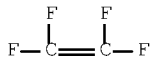
CM 1

CRN 225667-50-5
CMF C9 H6 F13 O5 P



CM 2

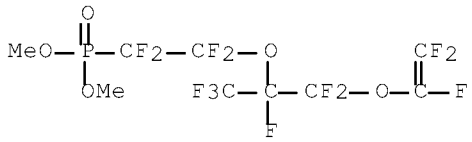
CRN 116-14-3
CMF C2 F4



RN 225667-53-8 HCAPLUS
CN Phosphonic acid, [2-[1-[difluoro[(trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoroethyl]-, dimethyl ester, polymer with 1,1,1,2,2,3,3-heptafluoro-3-[(trifluoroethenyl)oxy]propane and tetrafluoroethene (9CI) (CA INDEX NAME)

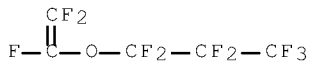
CM 1

CRN 225667-50-5
CMF C9 H6 F13 O5 P



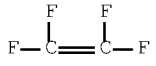
CM 2

CRN 1623-05-8
CMF C5 F10 O



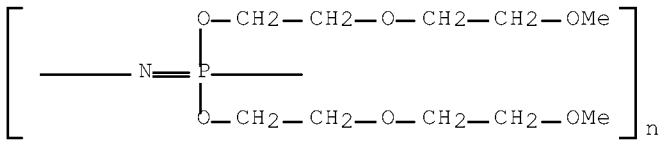
CM 3

CRN 116-14-3
CMF C2 F4



IC ICM H01M008-02
ICS C08L027-12; H01B001-12; H01M004-94; H01M008-10; H01M012-08
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
ST fluoropolymer ion exchange membrane fuel cell; phosphonate contg fluoropolymer ion exchanger battery; pillar particle fluoropolymer ion exchanger battery; electrochem power generation fluoropolymer ion exchanger
IT Primary batteries
(air-zinc; phosphonic acid group-containing fluoropolymers containing pillar particles as ion-exchange membranes in electrochem. power generating elements)
IT 225667-51-6P 225667-53-8P
(phosphonic acid group-containing fluoropolymers containing pillar particles as ion-exchange membranes in electrochem. power generating elements)

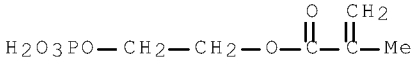
L45 ANSWER 29 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1999:187781 HCAPLUS Full-text
DOCUMENT NUMBER: 130:198752
TITLE: Study on new system of lithium ion polymer electrolyte
AUTHOR(S): Yu, Qingchun; Zhu, Qinwei; Miao, Guoxiang; Zhang, Rongyu; Wu, Yihua; Wang, Lei
CORPORATE SOURCE: Department of Applied Chemistry, Shanghai Jiao Tong University, Shanghai, 200240, Peop. Rep. China
SOURCE: Dianyuan Jishu (1999), 23(1), 5-6, 45
CODEN: DIJIFT; ISSN: 1002-087X
PUBLISHER: Dianyuan Jishu Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 23 Mar 1999
AB Three systems of lithium ion polymer electrolyte, i.e. single ion conductor electrolyte, MEEP and PVA plus plasticizer was studied. Single ion conductor could be prepared from grafting sulfonated polyether with polyurethane. With conductivity of 10-4 S/cm at room temperature and Na+ transport number of 0.99, cyclotriphosphazene could improve the mech. strength of MEEP while its conductivity became low. Lithium ion polymer electrolyte could be prepared by adding LiClO4 to PVA. By adding plasticizer in that system, the conductivity was increased due to low tg of polymer.
IT 98973-15-0, Poly(bis-(2(2-methoxyethoxy)ethoxy)phosphazene)
(lithium ion battery polymer electrolyte)
RN 98973-15-0 HCAPLUS
CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA INDEX NAME)



CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38

ST lithium battery polymer electrolyte
IT Battery electrolytes
Electric conductivity
Polymer electrolytes
(lithium ion battery polymer electrolyte)
IT Polyurethanes, uses
(polyether-, sulfonated; lithium ion battery polymer electrolyte)
IT 7791-03-9, Lithium perchlorate 9002-89-5, Pva 98973-15-0
, Poly(bis-(2(2-methoxyethoxy)ethoxy)phosphazene) 98973-15-0
, Meep
(lithium ion battery polymer electrolyte)
IT 291-37-2, Cyclotriphosphazene
(lithium ion battery polymer electrolyte)

L45 ANSWER 30 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1998:732039 HCAPLUS Full-text
DOCUMENT NUMBER: 130:41354
TITLE: Application of electrochemical impedance spectroscopy and surface analysis to the study of corrosion protection of carbon steels by phosphonates
AUTHOR(S): To, X. T.; Pebere, N.; Pelaprat, N.; Boutevin, B.; Hervaud, Y.
CORPORATE SOURCE: Equipe Metallurgie Physique, E.N.S.C.T., ESA CNRS 5071, Toulouse, F-31077, Fr.
SOURCE: Materials Science Forum (1998), 289-292(Pt. 2), 1193-1203
CODEN: MSFOEP; ISSN: 0255-5476
PUBLISHER: Trans Tech Publications Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 18 Nov 1998
AB The corrosion protection afforded by the surface treatment of C steel in solns. containing a monoacid phosphonate (Et octodecyl phosphonate (EODP)) and a mixture of phosphates (methacryloxyethyl phosphate (MOP)) bearing 1 or 2 acid groups and acting as a film-structuring compound, was studied by steady-state current-voltage curves and electrochem. impedance measurements using a rotating disk electrode. High protection was obtained with the mixture 1% MOP and 1% EODP after a 2 h treatment. Surface analyses (Raman and FTIR spectroscopy, XPS) indicate that the film was essentially the Fe(EODP)2 complex. MOP plays a significant role at the interface as it forms a thin oxide layer which improves the development and adherence of the layer formed by EODP. Electrochem. impedance measurements obtained after 30 h immersion of the treated steel in 0.1 M NaCl solution showed that the C steel surface had remained undamaged.
IT 24599-21-1
(corrosion protection of carbon steels by phosphonates)
RN 24599-21-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-(phosphonooxy)ethyl ester (CA INDEX NAME)



CC 55-10 (Ferrous Metals and Alloys)

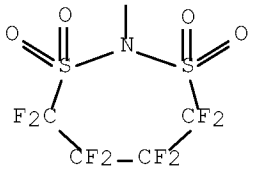
Section cross-reference(s): 72
IT 12725-37-0, XC35, processes 16165-53-0 24599-21-1
32435-46-4
(corrosion protection of carbon steels by phosphonates)
OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 31 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1998:526988 HCAPLUS Full-text
DOCUMENT NUMBER: 129:163924
ORIGINAL REFERENCE NO.: 129:33297a,33300a
TITLE: Alkali metal ion conducting electrolytes
INVENTOR(S): Angell, C. Austen; Liu, Changle; Xu, Kang
PATENT ASSIGNEE(S): Arizona Board of Regents, USA
SOURCE: U.S., 18 pp., Cont.-in-part of U.S. 5,506,073.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5786110	A	19980728	US 1995-471840 <--	19950606
US 5506073	A	19960409	US 1992-901669 <--	19920622
AT 174727	T	19990115	AT 1993-304803 <--	19930618
CA 2098870	A1	19931223	CA 1993-2098870 <--	19930621
JP 06119807	A	19940428	JP 1993-188613 <--	19930622
WO 9639725	A1	19961212	WO 1996-US8770 <--	19960605
W: AU, BR, CA, CN, FI, JP, KP, KR, MX, NO, RU, SG, UA, VN RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9660411	A	19961224	AU 1996-60411 <--	19960605
US 5962169	A	19991005	US 1998-122264 <--	19980724

PRIORITY APPLN. INFO.:
US 1992-901669 A2 19920622 <--
US 1995-471840 A 19950606 <--
WO 1996-US8770 W 19960605 <--

OTHER SOURCE(S): MARPAT 129:163924
ED Entered STN: 21 Aug 1998
GI



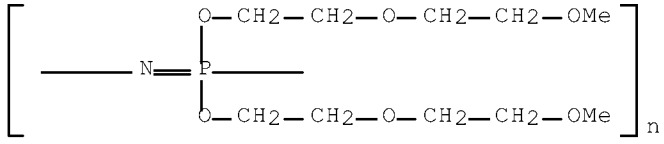
I

AB High-conductivity alkali-metal-ion containing **electrolytes** comprise viscous liquid or rubbery solid alkali metal salts, whose conductivity is mainly the motion of cation ions which remain freely mobile at low temps. The **electrolytes** have conductivity ≥10-4 S/cm at ≤100° and contain salts selected from MX [M = alkali metal ion;, X = F-, Cn-, NCO-, NCSe-, NO2-, ClO3-, BrO4-, BrO3-, IO4-, IO3-, CF3CO2-, CH3SO3-, p-tolyl-SO3-, CCl3SO3-, CF2ClCFClSO3-, I, (SO2Cl)2N-, (SO2F)2N-, (POCl2)2N-, (POF2)2N-, and/or (CF3SO2)3C-], MBX4, MAlZ4, MAl2X7, MGaX4, MPX6, PAsX6, MSbX6, MFeX4, and MMoX6 and are substantially non-crystalline and have glass transition temperature .ltorsim.20°. The **electrolytes** are suitable for solid state **batteries**.

IT **98973-15-0**, Meep
(compns. of alkali metal ion conducting **electrolytes** for solid **electrolyte batteries**)

RN 98973-15-0 HCAPLUS

CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA INDEX NAME)



IC ICM H01M010-36

INCL 429199000

CC 52-2 (**Electrochemical**, Radiational, and Thermal Energy Technology)

ST alkali metal ion conducting **battery electrolyte**

IT **Battery electrolytes**
(compns. of alkali metal ion conducting **electrolytes** for solid **electrolyte batteries**)

IT Polyoxyalkylenes, uses
(compns. of alkali metal ion conducting **electrolytes** for solid **electrolyte batteries**)

IT Polyoxyalkylenes, uses
(disulfonic acid, lithium salt; compns. of alkali metal ion conducting **electrolytes** for solid **electrolyte batteries**)

IT 143-24-8D, Tetraglyme, magnesium perchlorate chelate 540-72-7, Sodium thiocyanate 546-89-4, Lithium acetate 556-65-0, Lithium thiocyanate 7446-70-0, Aluminum chloride, uses 7550-35-8, Lithium bromide 7790-69-4, Lithium nitrate 7791-03-9, Lithium perchlorate

10034-81-8, Magnesium perchlorate 10034-81-8D, Magnesium perchlorate, tetraglyme chelated 10377-51-2, Lithium iodide 13453-71-9, Lithium chlorate 14283-07-9, Lithium fluoroborate 25322-68-3, Peo 25322-68-3D, disulfonic acid, lithium salt 25322-69-4 33454-82-9, Lithium trifluoromethanesulfonate 90076-65-6 98973-15-0, Meep 182013-69-0 186350-23-2
(compns. of alkali metal ion conducting electrolytes for solid electrolyte batteries)

OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 32 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1998:478263 HCAPLUS Full-text

DOCUMENT NUMBER: 129:138434

ORIGINAL REFERENCE NO.: 129:28253a,28256a

TITLE: Ionically conducting glasses with subambient glass transition temperatures

AUTHOR(S): Dillon, R. E.; Shriver, D. F.

CORPORATE SOURCE: Department of Chemistry and Materials Research Center, Northwestern University, Evanston, IL, 60208-3113, USA

SOURCE: Materials Research Society Symposium Proceedings (1998), 496(Materials for Electrochemical Energy Storage and Conversion II--Batteries, Capacitors and Fuel Cells), 505-510
CODEN: MRSPDH; ISSN: 0272-9172

PUBLISHER: Materials Research Society

DOCUMENT TYPE: Journal

LANGUAGE: English

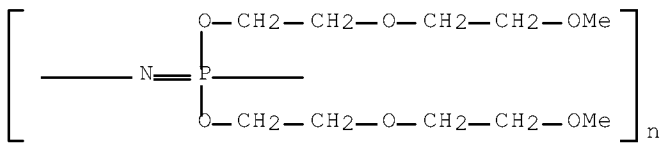
ED Entered STN: 03 Aug 1998

AB Cryptands and crown ethers along with the lithium salt, LiCF3SO2N(CH2)3OCH3 (LiMPSA) were employed to produce a new type of amorphous electrolyte. The key to producing an amorphous phase was the mismatch between the cavity size of the macrocycle and the diameter of the cation. The addition of poly(bis-(2(2-methoxyethoxy)ethoxy)phosphazene) (MEEP) to the amorphous complex, LiMPSA/2.2.2 Cryptand, imparts improved electrochem. and viscoelastic properties. Conversely, when poly(sodium-4-styrenesulfonate) (PS4SS) is added to the amorphous complex, LiMPSA/2.2.2 Cryptand, the product crystallizes. The ionic conductivity of the MEEP rubbery electrolyte is a full order of magnitude higher when compared to the analogous PS4SS doped electrolyte (3.8+10-5 S cm-1 (MEEP), 1.7+10-6 S cm-1 (PS4SS) both at 305°K).

IT 98973-15-0, Poly(bis-(2(2-methoxyethoxy)ethoxy)phosphazene)
(ionically conducting glasses with subambient glass transition temps.)

RN 98973-15-0 HCAPLUS

CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA INDEX NAME)

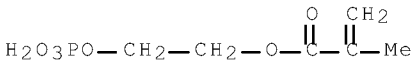


CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 58, 72
ST cryptand crown ether lithium salt electrolyte; ionically conducting glass lithium battery electrolyte
IT Battery electrolytes
Electric conductivity
Electric conductors, glass
(ionically conducting glasses with subambient glass transition temps.)
IT 294-93-9, 12-Crown-4 17455-13-9, 1,4,7,10,13,16-Hexaoxacyclooctadecane 23978-09-8 31250-06-3 31364-42-8 33100-27-5, 15-Crown-5
(ionically conducting glass electrolytes with subambient glass transition temps.)
IT 25704-18-1, Poly(sodium-4-styrenesulfonate) 98973-15-0, Poly(bis-(2(2-methoxyethoxy)ethoxy)phosphazene) 159063-63-5
(ionically conducting glasses with subambient glass transition temps.)
OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 33 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1997:693822 HCAPLUS Full-text
DOCUMENT NUMBER: 127:320953
ORIGINAL REFERENCE NO.: 127:62871a,62874a
TITLE: Electrodes for secondary nonaqueous electrolyte batteries and their manufacture
INVENTOR(S): Miyanowaki, Shin; Sato, Koji; Miyazaki, Yuchi
PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09274909	A	19971021	JP 1996-104809 <--	19960403
PRIORITY APPLN. INFO.:			JP 1996-104809 <--	19960403

ED Entered STN: 03 Nov 1997
AB The electrodes have a layer of an active mass-binder mixture coated on a collector and are prepared by using a nozzle spraying means to apply the mixture only to the required areas of the collector. The areas of the collector for connection with elec. leads are not coated. This method decreases material loss in the manufacture
IT 24599-21-1, Kayarad pm 1
(binders in manufacture of electrodes by nozzle spraying for secondary lithium batteries)
RN 24599-21-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-(phosphonooxy)ethyl ester (CA INDEX NAME)



IC ICM H01M004-04
ICS H01M004-02
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST battery electrode manuf nozzle spraying
IT Fluoropolymers, uses
(binders in manufacture of electrodes by nozzle spraying for secondary lithium batteries)
IT Battery electrodes
Spraying
(manufacture of electrodes by nozzle spraying of active mass-binder mixts. for secondary lithium batteries)
IT Nitrile rubber, uses
(manufacture of electrodes by nozzle spraying of active mass-binder mixts. for secondary lithium batteries)
IT 24599-21-1, Kayarad pm 1 24937-79-9, Poly(vinylidene fluoride) 77641-99-7, Kayarad dpha
(binders in manufacture of electrodes by nozzle spraying for secondary lithium batteries)
IT 7782-42-5, Graphite, uses
(manufacture of graphite anodes by nozzle spraying for secondary lithium batteries)
IT 12190-79-3, Cobalt lithium oxide (CoLiO2)
(manufacture of lithium cobaltate cathodes by nozzle spraying for batteries)
IT 9003-18-3
(nitrile rubber, manufacture of electrodes by nozzle spraying of active mass-binder mixts. for secondary lithium batteries)

L45 ANSWER 34 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1997:413762 HCAPLUS Full-text
DOCUMENT NUMBER: 127:53398
ORIGINAL REFERENCE NO.: 127:10129a,10132a
TITLE: Manufacture of electrodes for secondary nonaqueous batteries
INVENTOR(S): Miyazaki, Yuchi; Sato, Koji; Shindo, Tadafumi
PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09106809	A	19970422	JP 1995-286315 <--	19951009
PRIORITY APPLN. INFO.:			JP 1995-286315 <--	19951009

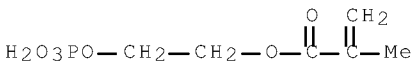
ED Entered STN: 04 Jul 1997

AB The electrodes are prepared by mixing an active mass and a binder to form a coating liquid, continuously applying the liquid on a collector, irradiating the coated layer under a mask with an electron beam, and removing the un-irradiated part by using a solvent. The binder is preferably a compound having electron bean activating function groups.

IT 24599-21-1, Kayamer PM 1
(masked electron beam curing and removing of binders in manufacture of electrodes for secondary nonaq. batteries)

RN 24599-21-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(phosphonooxy)ethyl ester (CA INDEX NAME)



IC ICM H01M004-04
ICS H01M004-62; H01M010-40

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST battery electrode manuf electron beam irradn; electrode binder masked electron beam irradn

IT Battery electrodes
Electron beams
(masked electron beam curing and removing of binders in manufacture of electrodes for secondary nonaq. batteries)

IT Fluoropolymers, uses
Nitrile rubber, uses
(masked electron beam curing and removing of binders in manufacture of electrodes for secondary nonaq. batteries)

IT 7782-42-5, Graphite, uses 12190-79-3, Cobalt lithium oxide (CoLiO2)
(masked electron beam curing and removing of binders in manufacture of electrodes for secondary nonaq. batteries)

IT 24599-21-1, Kayamer PM 1 24937-79-9, Neoflon vdf-vp 850
77641-99-7, Kayarad dpha 83045-03-8, Kayarad r 167
(masked electron beam curing and removing of binders in manufacture of electrodes for secondary nonaq. batteries)

IT 9003-18-3
(nitrile rubber, masked electron beam curing and removing of binders in manufacture of electrodes for secondary nonaq. batteries)

L45 ANSWER 35 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1997:380434 HCAPLUS Full-text

DOCUMENT NUMBER: 127:21003

ORIGINAL REFERENCE NO.: 127:4121a,4124a

TITLE: Fire-resistant cases for lithium battery containing organic electrolytes

INVENTOR(S): Nabeshima, Katsuki; Toyochi, Kaoru

PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09082293	A	19970328	JP 1995-235234 <--	19950913
JP 3408676	B2	20030519		
PRIORITY APPLN. INFO.:			JP 1995-235234 <--	19950913

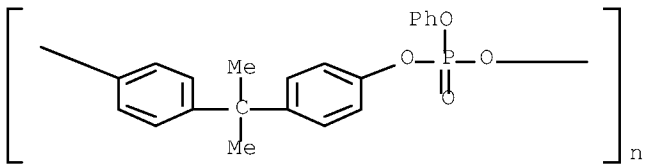
ED Entered STN: 18 Jun 1997
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title cases contain polyphenylene ethers and phosphoric acid esters I and/or II (Q1-4 = C1-6 alkyl, H; R1-4 = Me, H; Q11-44 = H, C1-6 alkyl; n ≥1, n1, n2 = 0-2, m1-4 = 1-3). Title cases have good resistance for organic electrolytes.

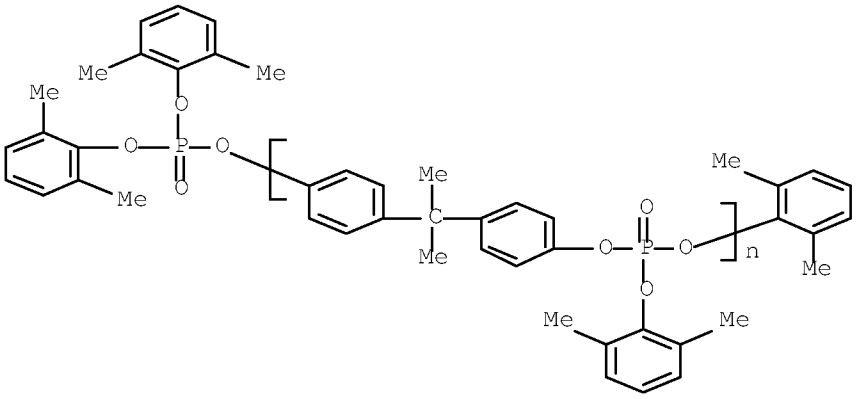
IT 61261-37-8 131640-20-5 172804-46-5
(fireproofing agents; fire-resistant battery cases containing polyphenylene ethers and phosphates for organic electrolytes)

RN 61261-37-8 HCAPLUS
CN Poly[oxy(phenoxyphosphinylidene)oxy-1,4-phenylene(1-methylethylidene)-1,4-phenylene] (CA INDEX NAME)



RN 131640-20-5 HCAPLUS
CN Poly[oxy[(methylphenoxy)phosphinylidene]oxy-1,4-phenylene(1-methylethylidene)-1,4-phenylene], α-(methylphenyl)-ω-[[bis(methylphenoxy)phosphinyl]oxy]- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 172804-46-5 HCAPLUS
CN Poly[oxy[(2,6-dimethylphenoxy)phosphinylidene]oxy-1,4-phenylene(1-methylethylidene)-1,4-phenylene], α-(2,6-dimethylphenyl)-ω-[[bis(2,6-dimethylphenoxy)phosphinyl]oxy]- (9CI) (CA INDEX NAME)



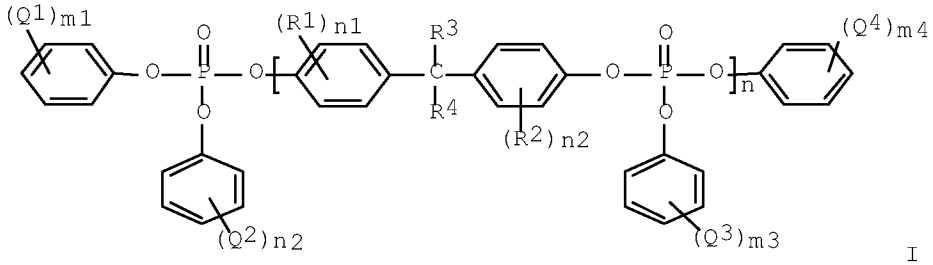
IC ICM H01M002-10
ICS C08K005-521; C08L071-12; H01M010-40
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 37
ST flame retardance battery case polyphenylene ether; polystyrene polyphenylene ether blend battery case; phosphate polyphenylene oxide electrolyte resistance case
IT Containers
(boxes; fire-resistant battery cases containing polyphenylene ethers and phosphates for organic electrolytes)
IT Battery electrolytes
Fireproofing agents
(fire-resistant battery cases containing polyphenylene ethers and phosphates for organic electrolytes)
IT Polyoxyphenylenes
(fire-resistant battery cases containing polyphenylene ethers and phosphates for organic electrolytes)
IT Secondary batteries
(lithium; fire-resistant battery cases containing polyphenylene ethers and phosphates for organic electrolytes)
IT 24938-67-8, Poly(2,6-dimethyl-1,4-phenylene ether)
(Fire-resistant battery cases containing polyphenylene ethers and phosphates)
IT 9003-53-6, Polystyrene 685 25134-01-4, 2,6-Dimethyl-1,4-phenylene ether homopolymer
(fire-resistant battery cases containing polyphenylene ethers and phosphates for organic electrolytes)
IT 61261-37-8 131640-20-5 172804-46-5
(fireproofing agents; fire-resistant battery cases containing polyphenylene ethers and phosphates for organic electrolytes)
IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 623-53-0, Methyl ethyl carbonate 21324-40-3, Lithium hexafluorophosphate
(organic electrolytes; fire-resistant battery cases containing polyphenylene ethers and phosphates for organic electrolytes)

L45 ANSWER 36 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1996:737868 HCAPLUS Full-text

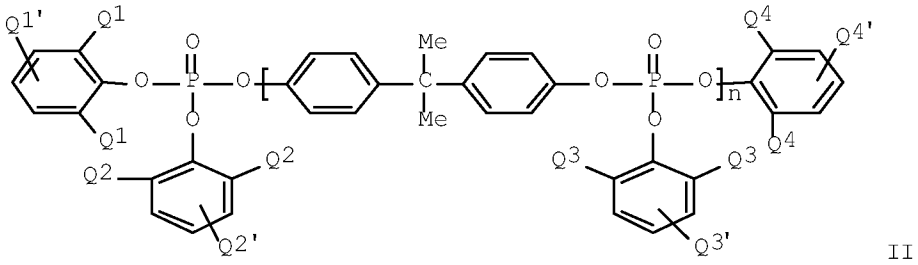
DOCUMENT NUMBER: 126:34368
ORIGINAL REFERENCE NO.: 126:6889a,6892a
TITLE: Poly(phenylene ether) cases for sealed secondary batteries
INVENTOR(S): Saito, Kunio; Toyochi, Kaoru
PATENT ASSIGNEE(S): Asahi Chemical Ind, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08250080	A	19960927	JP 1995-54270 <--	19950314
PRIORITY APPLN. INFO.:			JP 1995-54270 <--	19950314

OTHER SOURCE(S): MARPAT 126:34368
ED Entered STN: 14 Dec 1996
GI



I

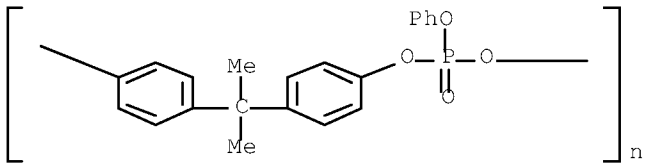


II

AB The cases are composed of a mixture comprising 100 parts polymers and 3-30 parts fireproofing agents I (Q1-4 = C1-6 alkyl or H; R1-4 = Me or H; n ≥1; n1 and n2 = 0, 1, or 2; m1-4 = 1, 2, or 3) or II (Q1'-4' = H or C1-6 alkyl). The heat-resistant cases have high rigidity and resistance to permeation of hot water or gases.

IT 61261-37-8 131640-20-5
(poly(phenylene ether) cases containing phosphate ester fireproofing agents for sealed batteries)

RN 61261-37-8 HCAPLUS
CN Poly[oxy(phenoxyphosphinylidene)oxy-1,4-phenylene(1-methylethylidene)-1,4-phenylene] (CA INDEX NAME)



RN 131640-20-5 HCAPLUS
CN Poly[oxy[(methylphenoxy)phosphinylidene]oxy-1,4-phenylene(1-methylethylidene)-1,4-phenylene], α-(methylphenyl)-ω-[[bis(methylphenoxy)phosphinyl]oxy]- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM H01M002-02
ICS C08K005-521; C08L071-12; C08L085-02
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
ST polyphenylene ether sealed battery case; polyoxyphenylene fireproofing agent blend battery case; phosphate ester fireproofing agent battery case
IT Fireproofing agents
(poly(phenylene ether) cases containing phosphate ester fireproofing agents for sealed batteries)
IT Polyoxyphenylenes
(poly(phenylene ether) cases containing phosphate ester fireproofing agents for sealed batteries)
IT Secondary batteries
(sealed; poly(phenylene ether) cases containing phosphate ester fireproofing agents for sealed batteries)
IT 7664-38-2D, Phosphoric acid, esters with bisphenols and phenols, uses 61261-37-8 131640-20-5
(poly(phenylene ether) cases containing phosphate ester fireproofing agents for sealed batteries)
IT 9003-53-6, Polystyrene 685 24938-67-8, Poly[oxy(2,6-dimethyl-1,4-phenylene)] 25134-01-4, 2,6-Dimethylphenol homopolymer
(poly(phenylene ether) cases containing phosphate ester fireproofing agents for sealed batteries)

L45 ANSWER 37 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1995:759059 HCAPLUS Full-text
DOCUMENT NUMBER: 123:291796
ORIGINAL REFERENCE NO.: 123:52153a,52156a
TITLE: Ion-conductive polymer and electrolyte additives for electrochemical devices
INVENTOR(S): Fauteux, Denis G.; Massucco, Arthur A.; Powell, John R.; Van, Buren Martin F.
PATENT ASSIGNEE(S): Little, Arthur D., Inc., USA
SOURCE: U.S., 12 pp. Cont.-in-part of U.S. Ser. No. 996,101.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5433876	A	19950718	US 1993-76005 <--	19930609
US 5453335	A	19950926	US 1992-996101 <--	19921223
CA 2152381	A1	19940707	CA 1993-2152381 <--	19931221
WO 9414828	A2	19940707	WO 1993-US12458 <--	19931221
WO 9414828	A3	19940818		
W: CA, JP, KR, RU				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 675894	A1	19951011	EP 1994-906450 <--	19931221
EP 675894	B1	20020710		
R: DE, DK, FR, GB, IT				
JP 08505650	T	19960618	JP 1993-515399 <--	19931221
JP 3236857	B2	20011210	JP 1994-515399 <--	19931221

PRIORITY APPLN. INFO.:	US 1992-996101 <--	A2	19921223
	US 1993-76005 <--	A	19930609
	WO 1993-US12458 <--	W	19931221

ED Entered STN: 26 Aug 1995

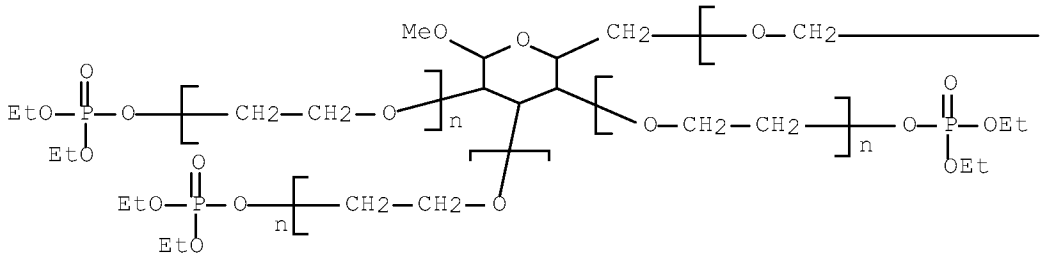
AB Compds. are provided for use in an **electrolyte** comprising repeating unit selected from the group consisting of cyclic and heterocyclic species having p C atoms and q heteroatoms, X = O, S and N, and where p is 4, 5 or 6 and q is 0, 1 or 2. The repeating unit is further substituted by 4-6 pendant groups (CHR)mO(CHRCHR O)nY, where the majority of pendant groups comprises ≥2 O; m is 0 or 1; n is 0-25; R is the same or different and selected from H, C1-18 alkyl, allylic and alkenyl radicals, and Q; and Q is the same or different and a functional group selected from the group consisting of polymerizable functionalities, plasticizing agents and ionic species. **Electrolytes**, plasticizers and macro-ions prepared from these compds. are described.

IT **161484-16-8P** **161484-17-9P** **161875-50-9P**
169480-11-9P
(ion-conductive polymer and **electrolyte** additives for electrochem. devices)

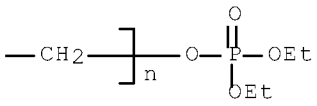
RN 161484-16-8 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-hydro-ω-[(diethoxyphosphinyl)oxy]-, ether with methyl D-glucopyranoside (4:1) (9CI) (CA INDEX NAME)

PAGE 1-A



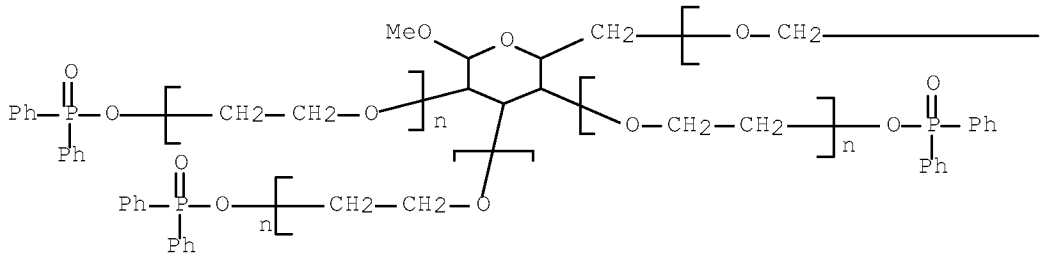
PAGE 1-B



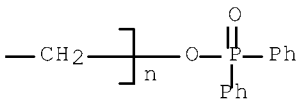
RN 161484-17-9 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-hydro-ω-[(diphenylphosphinyl)oxy]-, ether with methyl D-glucopyranoside (4:1) (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

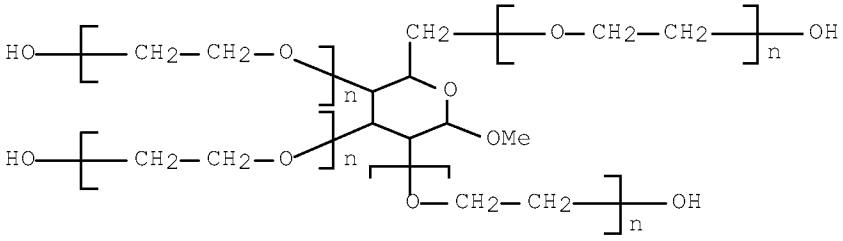


RN 161875-50-9 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-hydro-ω-hydroxy-, ether with methyl D-glucopyranoside (4:1), tris(diphenyl phosphate) 2-propenoate (9CI) (CA INDEX NAME)

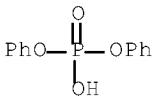
CM 1

CRN 53026-67-8
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C7 H14 O6
CCI PMS



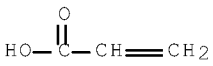
CM 2

CRN 838-85-7
CMF C12 H11 O4 P



CM 3

CRN 79-10-7
CMF C3 H4 O2



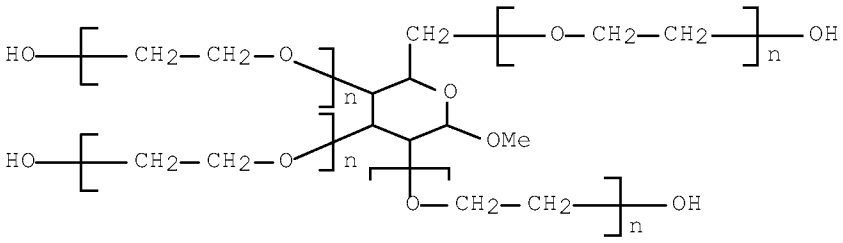
RN 169480-11-9 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-hydro-ω-hydroxy-, ether with methyl D-glucopyranoside (4:1), tris(diphenyl phosphate) 2-propenoate, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 161875-50-9
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C46 H43 O16 P3
CCI IDS, PMS

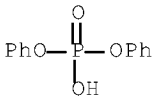
CM 2

CRN 53026-67-8
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C7 H14 O6
CCI PMS



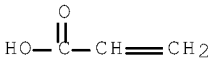
CM 3

CRN 838-85-7
CMF C12 H11 O4 P



CM 4

CRN 79-10-7
CMF C3 H4 O2



IC ICM H01M006-18
ICS C08F018-00; C08G002-00
INCL 252062200
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38, 76
ST ion conductive polymer electrochem device; electrolyte additive electrochem device
IT Battery electrolytes
(lithium complexes of derivs. of ethoxylated Me glucoside)
IT 7439-93-2DP, Lithium, Me glucoside ethoxylate derivs. complexes
161484-14-6DP, lithium complexes 161484-15-7DP, lithium complexes

161484-18-0DP, lithium complexes 169528-23-8DP, trimethylsilyl derivs., lithium complexes
(ion-conductive polymer and **electrolyte** additives for electrochem. devices)

IT 161484-14-6P 161484-15-7P **161484-16-8P**
161484-17-9P 161484-18-0P 161484-19-1P 161484-20-4P
161875-50-9P **169480-11-9P** 169528-23-8DP,
trimethylsilyl derivs.
(ion-conductive polymer and **electrolyte** additives for electrochem. devices)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

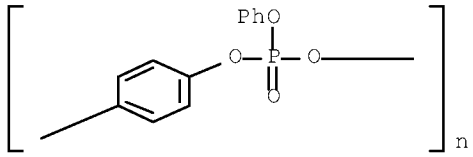
L45 ANSWER 38 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1995:586414 HCAPLUS Full-text
DOCUMENT NUMBER: 122:318680
ORIGINAL REFERENCE NO.: 122:57863a,57866a
TITLE: Fire-resistant solid polymer **electrolytes**
INVENTOR(S): Chaloner-Gill, Benjamin
PATENT ASSIGNEE(S): Valence Technology, Inc., USA
SOURCE: U.S., 9 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5393621	A	19950228	US 1993-139229 <--	19931020
US 5521025	A	19960528	US 1994-230269 <--	19940420
WO 9511528	A1	19950427	WO 1994-US12602 <--	19941020
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ, VN				
RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9510478	A	19950508	AU 1995-10478 <--	19941020
PRIORITY APPLN. INFO.:			US 1993-139229 A2 <--	19931020
			WO 1994-US12602 W <--	19941020

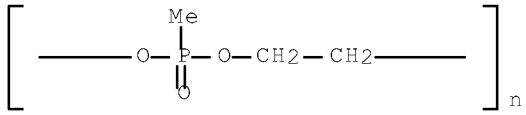
ED Entered STN: 03 Jun 1995
AB The **electrolytes** for **batteries** comprise an organophosphorus polymer having a mol. weight of .apprx.1000-80,000, an inorg. salt, and an **electrolyte** solvent. The organophosphorus polymer is selected from polyphosphoroamides and polyphosphines. The polymer contains the repeating units [P(Z)(O)kR]n, where k is 0 or 1; R is selected from SR1S, OR1S, N(R2)R1N(R2), and N(R2)R1; Z is R2 or OR2; R1 is C1-40 hydrocarbylene or oxyhydrocarbylene; R2 is C1-40 hydrocarbyl, oxyhydrocarbyl, or poly(oxyalkylene); and n is an integer having a value between .apprx.10-500.

IT 26027-02-1P 56727-36-7P 163519-56-0P
163519-57-1P
(in fire-resistant solid polymer electrolytes for batteries)

RN 26027-02-1 HCAPLUS
CN Poly[oxy(phenoxyphosphinylidene)oxy-1,4-phenylene] (CA INDEX NAME)



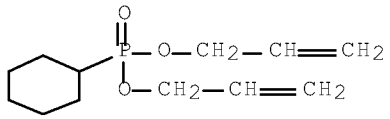
RN 56727-36-7 HCAPLUS
CN Poly[oxy(methylphosphinylidene)oxy-1,2-ethanediyl] (CA INDEX NAME)



RN 163519-56-0 HCAPLUS
CN Phosphonic acid, cyclohexyl-, di-2-propenyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

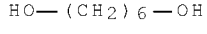
CRN 88616-17-5
CMF C12 H21 O3 P



RN 163519-57-1 HCAPLUS
CN Phosphorous acid, triphenyl ester, polymer with 1,6-hexanediol (9CI) (CA INDEX NAME)

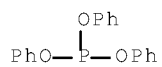
CM 1

CRN 629-11-8
CMF C6 H14 O2



CM 2

CRN 101-02-0
CMF C18 H15 O3 P



IC ICM H01M006-18
INCL 429192000
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 37, 38
ST battery organophosphorus polymer electrolyte; polyphosphoroamide battery electrolyte; polyphosphine battery electrolyte
IT Battery electrolytes
(organophosphorus polymers for)
IT 26027-02-1P 56727-36-7P 163519-56-0P 163519-57-1P
(in fire-resistant solid polymer electrolytes for batteries)
OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 39 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1989:79395 HCAPLUS Full-text
DOCUMENT NUMBER: 110:79395
ORIGINAL REFERENCE NO.: 110:13077a,13080a
TITLE: Alkaline zinc batteries containing corrosion inhibitors
INVENTOR(S): Takada, Kanji; Okazaki, Ryoji; Miura, Akira
PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63254671	A	19881021	JP 1987-89544 <--	19870410
JP 07050612	B	19950531		

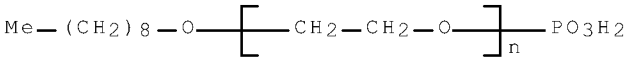
PRIORITY APPLN. INFO.: JP 1987-89544 <-- 19870410
ED Entered STN: 04 Mar 1989

AB Polyoxyethylene monoalkyl ethers having their terminal groups substituted by phosphonic-, sulfonic-, or methylenecarboxylic-acid groups, or their alkali metal salts are used as anode corrosion inhibitors in the title batteries. Thus, the amount of H evolved by immersing 10 g Zn-1% Hg in 5 mL ZnO- and C9H19O(C2H4O)5PO3H2-saturated 40% KOH at 45° for 20 days was 72 μL/g, vs. 535 μL/g for immersion in a solution without the phosphonic acid. Zn batteries using electrolytes containing the invention inhibitors showed less electrolyte leak and less thickness increase than control batteries after storing.

IT 51294-00-9 70700-21-9 99724-89-7
108765-96-4 119036-26-9 119036-28-1
119036-31-6
(corrosion inhibitor, for zinc anodes, in alkaline batteries)

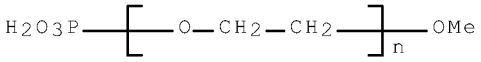
RN 51294-00-9 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-phosphono-ω-(nonyloxy)- (CA INDEX NAME)



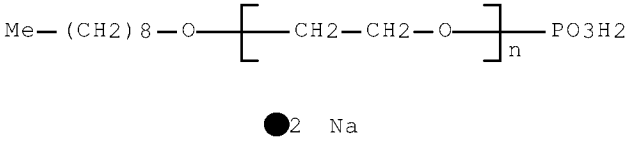
RN 70700-21-9 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-phosphono-ω-methoxy- (CA INDEX NAME)



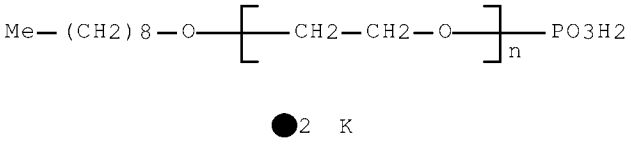
RN 99724-89-7 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-phosphono-ω-(nonyloxy)-, disodium salt (9CI) (CA INDEX NAME)



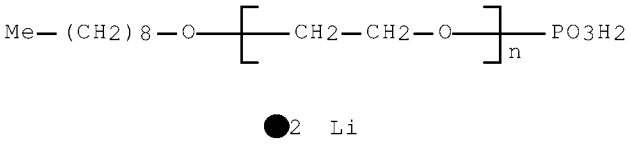
RN 108765-96-4 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-phosphono-ω-(nonyloxy)-, dipotassium salt (9CI) (CA INDEX NAME)



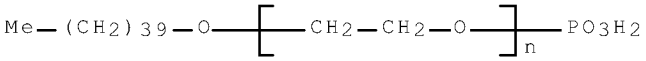
●2 K

RN 119036-26-9 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-phosphono-ω-(nonyloxy)-, dilithium salt (9CI) (CA INDEX NAME)

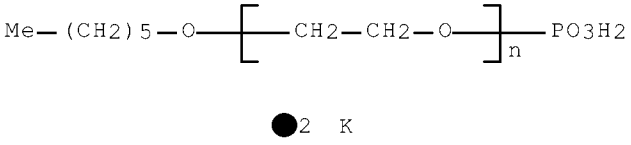


●2 Li

RN 119036-28-1 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-phosphono-ω-(tetracontyloxy)- (9CI) (CA INDEX NAME)



RN 119036-31-6 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-phosphono-ω-(hexyloxy)-, dipotassium salt (9CI) (CA INDEX NAME)

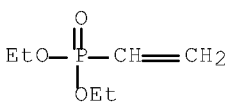


●2 K

IC ICM H01M006-06
ICS H01M004-06; H01M004-42; H01M004-62
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST battery zinc anode corrosion inhibitor; polyoxyethylene ether zinc anode anticorrosion
IT Anodes
(battery, zinc, polyoxyethylene alkyl ether derivs. as corrosion inhibitors for)
IT Zinc alloy, base
(anodes, polyoxyethylene alkyl ether derivs. corrosion

inhibitors for, in alkaline batteries)
IT 7440-66-6, Zinc, uses and miscellaneous
(anodes, polyoxyethylene alkyl ether derivs. corrosion inhibitors for, in alkaline batteries)
IT 51294-00-9 70700-21-9 81337-77-1
99724-89-7 105391-15-9 108765-96-4 119036-24-7
119036-25-8 119036-26-9 119036-27-0
119036-28-1 119036-29-2 119036-30-5 119036-31-6
(corrosion inhibitor, for zinc anodes, in alkaline batteries)
IT 39305-93-6
(microalloyed, anodes, alkaline battery containing, polyoxyethylene alkyl ethers as corrosion inhibitors for)
IT 1333-74-0, Hydrogen, properties
(prevention of evolution of, from zinc battery anodes, polyoxyethylene alkyl ethers derivs. for)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L45 ANSWER 40 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1987:101679 HCAPLUS Full-text
DOCUMENT NUMBER: 106:101679
ORIGINAL REFERENCE NO.: 106:16639a,16642a
TITLE: Reaction mechanism of cathodic crossed coupling of acetone with unsaturated compounds in acidic solution
AUTHOR(S): Koizumi, Toshio; Fuchigami, Toshio; Kandeel, Zaghloul El-Shahat; Sato, Norio; Nonaka, Tsutomu
CORPORATE SOURCE: Dep. Electron. Chem., Tokyo Inst. Technol., Yokohama, 227, Japan
SOURCE: Bulletin of the Chemical Society of Japan (1986), 59(3), 757-62
CODEN: BCSJA8; ISSN: 0009-2673
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 106:101679
ED Entered STN: 05 Apr 1987
AB The cathodic crossed coupling of acetone with unsatd. compds. in aqueous sulfuric acid proceeded smoothly, when the compds. which had radical-acceptable double bonds and were adsorbed on a mercury cathode, were used. The coupling occurs via the addition of a radical intermediate formed by the one-electron reduction of acetone to the double bonds on the cathode surface. Possibility of the addition of an anionic intermediate derived from acetone was excluded by no occurrence of the coupling of acetone with a polar acetylenic triple bond compound adsorbed on the cathode.
IT 682-30-4
(cathodic crossed coupling of, with acetone)
RN 682-30-4 HCAPLUS
CN Phosphonic acid, P-ethenyl-, diethyl ester (CA INDEX NAME)



CC 22-13 (Physical Organic Chemistry)

ST cathode crossed coupling acetone unsatd; mechanism
cathode crossed coupling
IT 107-11-9 107-18-6, reactions 119-65-3 682-30-4
1906-79-2 10603-92-6 18707-60-3 23326-27-4
(cathodic crossed coupling of, with acetone)
OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

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=> d his nofile

     (FILE 'HOME' ENTERED AT 09:16:54 ON 09 OCT 2009)

     FILE 'HCAPLUS' ENTERED AT 09:17:06 ON 09 OCT 2009
L1             1 SEA SPE=ON  ABB=ON  PLU=ON  US20040013944/PN
                 SEL RN

     FILE 'REGISTRY' ENTERED AT 09:17:23 ON 09 OCT 2009
L2            38 SEA SPE=ON  ABB=ON  PLU=ON  (463-79-6/BI OR 10377-51-2/BI
                 OR 105-58-8/BI OR 108-32-7/BI OR 108-88-3/BI OR 108554-72-9
                 /BI OR 113187-28-3/BI OR 131651-65-5/BI OR 1330-20-7/BI OR
                 14024-11-4/BI OR 14283-07-9/BI OR 18424-17-4/BI OR
                 21324-40-3/BI OR 24599-21-1/BI OR 25496-08-6/BI OR
                 27359-10-0/BI OR 29935-35-1/BI OR 33454-82-9/BI OR
                 35363-40-7/BI OR 37220-89-6/BI OR 41891-54-7/BI OR
                 4437-85-8/BI OR 4472-22-4/BI OR 462-06-6/BI OR 4645-32-3/BI
                  OR 4851-64-3/BI OR 56525-42-9/BI OR 616-38-6/BI OR
                 623-53-0/BI OR 623-96-1/BI OR 682-30-4/BI OR 71-43-2/BI OR
                 7439-93-2/BI OR 7447-41-8/BI OR 7791-03-9/BI OR 78-67-1/BI
                 OR 90076-65-6/BI OR 96-49-1/BI)
L3             9 SEA SPE=ON  ABB=ON  PLU=ON  L2 AND P/ELS
L4       1417509 SEA SPE=ON  ABB=ON  PLU=ON  (P(L)O)/ELS
L5         44384 SEA SPE=ON  ABB=ON  PLU=ON  L4 AND PMS/CI
L6             0 SEA SPE=ON  ABB=ON  PLU=ON  L5 AND L3
L7         16344 SEA SPE=ON  ABB=ON  PLU=ON  L4 AND PROPENOIC ACID?
L8        176900 SEA SPE=ON  ABB=ON  PLU=ON  L4 AND ETHYL ESTER?
L9          2397 SEA SPE=ON  ABB=ON  PLU=ON  L4 AND BUTENOIC ACID?
L10        32885 SEA SPE=ON  ABB=ON  PLU=ON  L4 AND ETHENYL?
L11       131674 SEA SPE=ON  ABB=ON  PLU=ON  L4 AND METHYLETHYL?
L12            8 SEA SPE=ON  ABB=ON  PLU=ON  L3 AND (L7 OR L8 OR L9 OR L10
                 OR L11)

     FILE 'HCAPLUS' ENTERED AT 09:22:35 ON 09 OCT 2009
L13         1409 SEA SPE=ON  ABB=ON  PLU=ON  L12
L14        41850 SEA SPE=ON  ABB=ON  PLU=ON  L5
L15        43102 SEA SPE=ON  ABB=ON  PLU=ON  L13 OR L14
L16            1 SEA SPE=ON  ABB=ON  PLU=ON  L15 AND L1
                 E  BATTERY ELECTROLYTES/CT
L17        11355 SEA SPE=ON  ABB=ON  PLU=ON  "BATTERY ELECTROLYTES"+PFT,NT/C
                 T
L18           58 SEA SPE=ON  ABB=ON  PLU=ON  L15 AND L17
L19            2 SEA SPE=ON  ABB=ON  PLU=ON  L13 AND L17
L20            6 SEA SPE=ON  ABB=ON  PLU=ON  L13 AND BATTER?

     FILE 'REGISTRY' ENTERED AT 09:24:42 ON 09 OCT 2009
L21        26435 SEA SPE=ON  ABB=ON  PLU=ON  L5 AND (PHOSPHIN? OR PHOSPHON?)
L22       203815 SEA SPE=ON  ABB=ON  PLU=ON  (L7 OR L8 OR L9 OR L10 OR L11)
                 AND (PHOSPHIN? OR PHOSPHON?)

     FILE 'HCAPLUS' ENTERED AT 09:26:40 ON 09 OCT 2009
L23        16945 SEA SPE=ON  ABB=ON  PLU=ON  L21
L24       128988 SEA SPE=ON  ABB=ON  PLU=ON  L22
L25          138 SEA SPE=ON  ABB=ON  PLU=ON  (L23 OR L24) AND L17
L26          332 SEA SPE=ON  ABB=ON  PLU=ON  (L23 OR L24) AND BATTER?
L27            1 SEA SPE=ON  ABB=ON  PLU=ON  L26 AND L1
L28          143 SEA SPE=ON  ABB=ON  PLU=ON  L26 AND DEV/RL
L29           30 SEA SPE=ON  ABB=ON  PLU=ON  L28 AND L23
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L30	31	SEA SPE=ON ABB=ON PLU=ON L13 AND ELECTROCHEM?/SC,SX
L31	14	SEA SPE=ON ABB=ON PLU=ON L30 AND DEV/RL
L32	20	SEA SPE=ON ABB=ON PLU=ON L13 AND (ELECTRODE# OR ANODE# OR CATHODE# OR NEGATIVE ELECTRODE# OR POSITIVE ELECTRODE# OR BATTERY# OR BATTERIES#)
L33	12	SEA SPE=ON ABB=ON PLU=ON L30 AND (ELECTRODE# OR ANODE# OR CATHODE# OR NEGATIVE ELECTRODE# OR POSITIVE ELECTRODE# OR BATTERY# OR BATTERIES#)
L34	30	SEA SPE=ON ABB=ON PLU=ON L29 AND (ELECTRODE# OR ANODE# OR CATHODE# OR NEGATIVE ELECTRODE# OR POSITIVE ELECTRODE# OR BATTERY# OR BATTERIES#)
L35	49	SEA SPE=ON ABB=ON PLU=ON (L32 OR L33 OR L34)
L36	1	SEA SPE=ON ABB=ON PLU=ON L35 AND L1
L37	25	SEA SPE=ON ABB=ON PLU=ON L35 AND (1840-2002)/PRY,AY,PY
L38	851	SEA SPE=ON ABB=ON PLU=ON L14 AND (ELECTRODE# OR ANODE# OR CATHODE# OR NEGATIVE ELECTRODE# OR POSITIVE ELECTRODE# OR BATTERY# OR BATTERIES#)
L39	300	SEA SPE=ON ABB=ON PLU=ON L38 AND DEV/RL
L40	15	SEA SPE=ON ABB=ON PLU=ON L39 AND LITHIUM SECONDARY?
L41	118	SEA SPE=ON ABB=ON PLU=ON L39 AND ELECTROLYT?
L42	108	SEA SPE=ON ABB=ON PLU=ON L41 AND ELECTROCHEM?/SC,SX
L43	68	SEA SPE=ON ABB=ON PLU=ON L42 AND (1840-2002)/PRY,AY,PY
L44	24	SEA SPE=ON ABB=ON PLU=ON L43 AND L17
L45	40	SEA SPE=ON ABB=ON PLU=ON L37 OR L44